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Cp. 2

# **WATER SUPPLY OUTLOOK FOR MONTANA**



**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**

Collaborating with  
**MONTANA AGRICULTURAL EXPERIMENT STATION**

AS OF  
**APR. 1, 1975**

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*Cover Photo: Cabins near Sacajawea Snow Course  
in Bridger Mountains, Montana.*

SPS PHOTO 1..P480-15

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

## PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR MONTANA**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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## CONTENTS

	Page
MONTANA WATER SUPPLY OUTLOOK . . . . .	1-2
PROSPECTIVE STREAMFLOW FORECASTS . . . . .	3
SUMMARY OF SNOW MEASUREMENTS . . . . .	4
MOUNTAIN SNOW WATER EQUIVALENT . . . . .	5
SOIL MOISTURE . . . . .	6
RESERVOIR STORAGE . . . . .	7
STREAMFLOW FORECASTS . . . . .	8-14
SNOW . . . . .	15-20
SNOW PILLOW DATA	
Columbia	
Poorman Creek and Banfield Mountain . . . . .	21
Hawkins Lake and Garver Creek . . . . .	22
Noisy Basin . . . . .	23
Black Pine, Peterson Meadows, and Combination . . . . .	24
Hoodoo Basin . . . . .	25
North Fork Elk Creek and Lubrecht Flume . . . . .	26
Twin Lakes, Saddle Mountain, and Twelvemile Creek . . . . .	27
Missouri	
Black Bear and Madison Plateau . . . . .	28
Whiskey Creek, Tepee Creek, and West Yellowstone . . . . .	29
Bridger Bowl and Maynard Creek . . . . .	30
Shower Falls, Carrot Basin, and Lick Creek . . . . .	31
Spur Park and Deadman Creek . . . . .	32
Rocker Peak, Frohner Meadows, and Rocky Boy . . . . .	33
Mount Lockhart and Waldron . . . . .	34
Cole Creek . . . . .	35
Fisher Creek, White Mill, and Northeast Entrance . . . . .	36
MAP, SNOW COURSES, AND RELATED DATA MEASURING SITES	
COOPERATORS . . . . .	Inside Back Cover





## MONTANA WATER SUPPLY OUTLOOK

April 1, 1975

\* \* \* \* \*  
\* March was a good snowfall month for most mountain \*  
\* areas. The snowpack is generally near or above \*  
\* average in all areas. Higher elevations generally \*  
\* have nearer average snowpack. The low elevation \*  
\* snow is generally above average as the result of \*  
\* good snowfall and very little melt during the past \*  
\* month. Some deficiencies continue to exist along \*  
\* the continental divide North of Rogers Pass. \*  
\* \*  
\* Streamflow is forecast near average over most of \*  
\* the state. Exceptions are areas in the southwest \*  
\* and southeastern part of the state and West of \*  
\* Plains and Kalispell where above average runoff is \*  
\* expected. Below average streamflow is anticipated \*  
\* from streams in the Marias, Teton, and Sun River \*  
\* drainages. Early season runoff will be above aver- \*  
\* age while the heavy low elevation snowpack is \*  
\* melting. Late season irrigation supplies should \*  
\* be average in most areas. \*  
\* \*  
\* \* \* \* \*

### COLUMBIA RIVER DRAINAGE

Snow - The mountain snowpack is above average near Butte and West of Kalispell and in most of the Kootenai and Bitterroot River drainages and generally near average elsewhere. Most areas have a large low elevation snowpack decreasing nearer to average in the higher elevations. Soils under the snowpack contain average to below average moisture.

Streamflow - Spring and Summer runoff is forecast to be near average from most drainages. Above average streamflow is expected from areas West of Kalispell and Plains and from Southern Bitterroot River tributaries. Early spring streamflow is expected to be high as the heavy low elevation snowpack melts. Late season streamflow should be near average.



## MISSOURI RIVER DRAINAGE

Snow - Snowpack is quite variable over the basin. Below average conditions persist in the Sun, Teton, and Marias River headwaters with near average snowpack over much of the Missouri River water producing areas. Above average snow cover exists in the headwaters of the Big Hole, Upper Red Rock, and Madison River drainages and in the Bear Paw, Little Rockies, and Snowy Mountains. The low elevation snowpack is generally above average.

Streamflow - Above average runoff is forecast from the Beaverhead, Big Hole, and Boulder River drainages. Other areas should have near to above average streamflow except for below average conditions in the Sun, Teton, and Marias River Basins. Early season runoff is expected to be above average as the large low elevation snowpack melts. Late season runoff should be about average.

## YELLOWSTONE RIVER BASIN

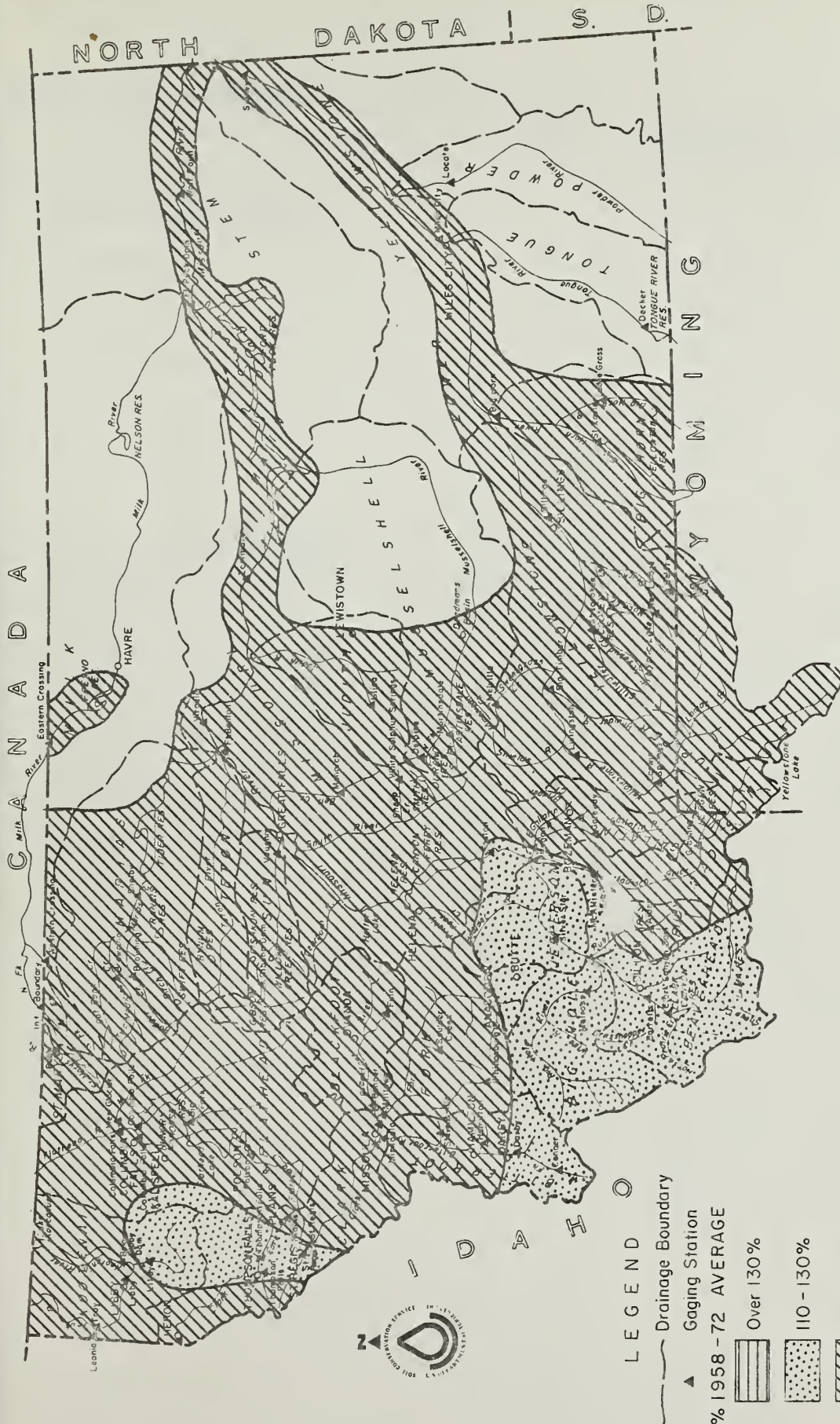
Snow - Current snowpack is near average in most areas except for above average conditions in the Crazy Mountains. Some areas in extreme Yellowstone headwaters in the Park are below average. Low elevations generally have above average snowpack.

Streamflow - Spring and Summer runoff is forecast near to a little above average on all drainages. Late season runoff should be near average. Early season runoff is expected to be above average as the large low elevation snowpack melts.

NOTICE: Copies of "Summary of Snow Survey Measurements, 1922-1974" may be obtained from Snow Survey Supervisor, P. O. Box 98, Bozeman, Montana 59715.







MONTANA

PROSPECTIVE STREAMFLOW FORECASTS  
AS OF

APRIL 1, 1975



LEGEND  
— Drainage Boundary  
▲ Gaging Station

% 1958-72 AVERAGE

- Over 130%
- 110 - 130%
- 90 - 110%
- 70 - 90%
- Under 70%

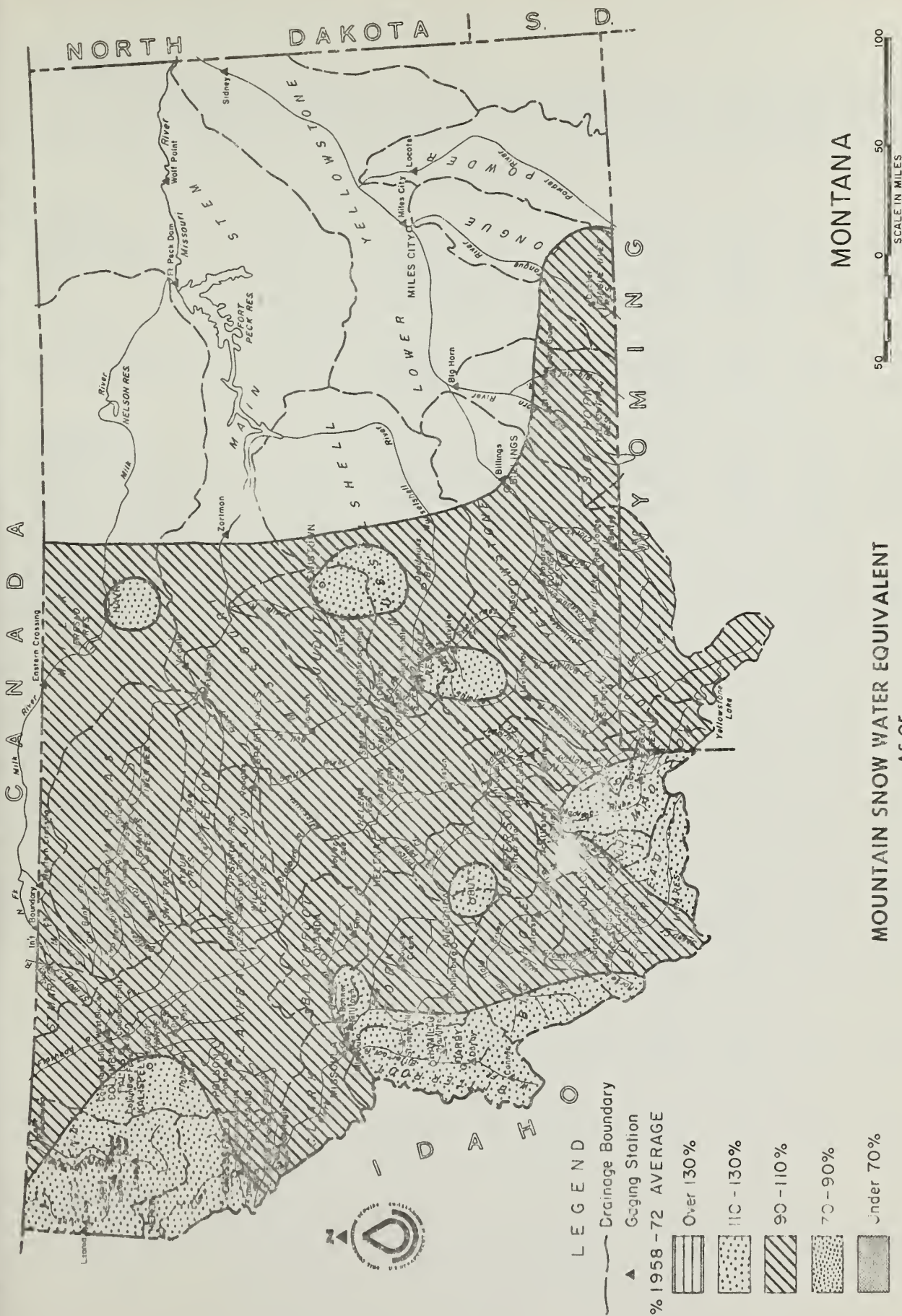


**SUMMARY of SNOW MEASUREMENTS** (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
<u>COLUMBIA RIVER DRAINAGE</u>			
Kootenai	25	81	114
Flathead	21	83	107
Upper Clark Fork	30	97	112
Lower Clark Fork	12	83	114
Bitterroot	14	84	116
<u>MISSOURI RIVER DRAINAGE</u>			
Jefferson	52	88	116
Madison	19	82	109
Gallatin	13	90	106
Missouri Main Stem	12	96	109
Judith-Musselshell	15	99	110
Marias-Teton-Sun	7	89	95
Milk	3	107	117
<u>YELLOWSTONE RIVER DRAINAGE</u>			
Yellowstone (above Bighorn)	28	88	106
Bighorn (in Wyoming)	24	98	103
Little Bighorn	7	157	120
Tongue	12	141	116
Powder	6	135	103
-4-			









# SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †

## COLUMBIA RIVER BASIN

### Kootenai

Baree Trail	3800	48	7.5	4/2	6.4	6.6	6.4
Murphy Lake R. S.	3000	48	22.6	4/3	20.2	22.3	21.3
Raven	3050	48	23.0	4/2	17.0	17.2	19.4

### Flathead

Desert Mountain	5600	54	8.4	3/28	6.2	8.8	7.6
Marias Pass	5250	54	6.5	3/25	4.2	7.2	5.7

### Clark Fork

Black Pine	7100	48	10.0	3/27	7.1	8.2	7.5
Lubrecht Forest	4100	48	26.8	4/3	15.7	18.3	20.6
Seeley Lake R. S.	4030	48	11.9	4/1	9.2	11.3	10.0
Skalkaho Summit	7260	48	10.8	-	-	10.2	9.8

### Bitterroot

Gibbons Pass	7100	48	7.1	3/27	3.6	5.6	4.9
Lolo Pass	5250	48	10.6	3/28	5.1	6.8	6.1

## MISSOURI RIVER BASIN

### Beaverhead

Lakeview	6700	48	15.3	3/31	8.3	16.4	9.9
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### Madison

West Yellowstone	6700	48	5.5	3/29	1.8	3.4	2.8
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### Gallatin

Bridger Bowl	7250	48	17.0	3/25	15.0	15.2	16.1
College Site No. 2	4856	54	17.7	3/28	15.9	20.1	17.1
Lick Creek	6860	48	18.8	3/28	13.4	14.6	16.9
Twenty-One Mile	7150	48	10.0	3/29	3.1	8.0	4.7

### Missouri Main Stem

Kings Hill	7420	48	11.8	3/28	7.2	8.4	6.8
Stemple Pass	6350	48	5.9	4/1	3.7	5.6	4.4

### Milk

Beaver Creek	3950	48	20.9	3/28	9.1	8.2	14.4
Rocky Boy	4700	36	10.1	3/28	7.7	9.7	7.9

### Yellowstone

Battle Ridge	6020	48	17.6	3/25	14.6	13.8	13.8
Northeast Entrance	7350	48	9.4	-	-	5.8	6.3
PMC Dryland	3700	48	20.7	3/31	7.4	7.6	-





# RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average
COLUMBIA RIVER BASIN					
Kootenai	Koocanusa	5,694.0	768.9	1,061.0	-
Flathead	Hungry Horse	3,428.0	1,793.0	1,883.0	2,157.0
	Flathead Lake	1,791.0	651.6	933.9	794.5
	Camas (4)	45.2	19.8	16.7	27.1
Clark Fork	Mission Valley (8)	100.3	32.9	43.5	38.1
	Georgetown Lake	31.0	22.4	17.8	23.8
	Lower Willow Creek	4.6	1.8	3.9	1.4
	Nevada Creek	12.6	-	-	-
Bitterroot	Noxon Rapids	334.6	205.0	328.0	198.5
	Como	34.9	6.3	-	15.8
	Painted Rocks	31.7	-	0.0	20.2
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	328.9	124.8	152.2	145.6
	Lima	84.0	46.5	54.6	33.8
Ruby	Ruby	38.8	29.3	31.0	30.6
Madison	Hebgen Lake	377.5	247.7	229.8	206.3
	Ennis Lake	41.0	34.4	37.8	36.3
Gallatin	Middle Creek	8.0	4.3	4.4	3.9
Missouri	Canyon Ferry	2,043.0	1,323.0	1,490.0	1,561.0
	Hauser & Helena	61.9	63.0	62.5	54.2
	Lake Helena	10.4	10.9	10.7	8.3
	Holter Lake	81.9	79.9	80.4	57.9
	Smith River	10.6	-	3.9	7.1
	Bair	7.0	-	3.4	5.4
	Martinsdale	23.1	-	9.0	7.8
	Deadman's Basin	72.2	-	40.8	37.1
	Fort Peck Lake	19,140.0	15,780.0	15,610.0	13,310.0
	Gibson	104.8	61.7	44.5	43.6
	Willow Creek	32.2	24.4	21.4	21.0
	Pishkun	32.0	16.5	3.6	17.2
Marias	Lower Two Medicine	11.9	6.3	-	-
	Four Horns	19.2	14.0	-	-
	Swift	30.0	-	-	19.7
	Lake Frances	111.9	-	-	79.3
Milk	Tiber	1,347.0	486.1	545.2	598.9
	Beaver Creek	3.5	1.5	0.0	-
	Fresno	127.2	77.6	26.2	86.5
	Nelson	66.8	45.6	22.9	40.7
Yellowstone	Lake Sherburne	66.2	19.6	39.9	24.7
	Mystic Lake	21.0	4.0	7.0	4.7
	Tongue River	68.0	-	36.8	38.4
	Cooney	27.4	12.2	18.2	15.6
Bighorn	Bighorn Lake	1,356.0	735.0	848.6	796.2





# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

## COLUMBIA RIVER BASIN

KOOTENAI RIVER					
Libby (near) (2)	7830	105	Apr-Sept	9506	7456
Below Libby Dam	6750	105	Apr-July	8320	6417
	5260	105	Apr-June	6384	5011
FISHER RIVER					
Libby (near)	350	122	Apr-Sept		286
	335	124	Apr-July		269
YAAK RIVER					
Troy (near)	610	107	Apr-Sept		568
	590	108	Apr-July		544
KOOTENAI RIVER					
Leonia (at) (2)	9500	105	Apr-Sept		9073
	8400	106	Apr-July		7957
	6800	106	Apr-June		6431
FLINT CREEK					
Boulder Creek (below) (3)	73.0	102	Apr-Sept		71.6
	59.0	105	Apr-July		56.1
MIDDLE FORK ROCK CREEK					
Philipsburg (near)	79.0	104	Apr-Sept		75.9
	72.0	105	Apr-July		68.6
NEVADA CREEK					
Finn (near)	24.5	113	Apr-Sept		21.6
	23.0	114	Apr-July		20.1
BLACKFOOT RIVER					
Bonner (near)	1100	107	Apr-Sept		1031
	1000	107	Apr-July		934
	870	107	Apr-June		814
CLARK FORK RIVER					
Milltown (above) (4)	820	104	Apr-Sept		792
	720	104	Apr-July		690
	620	105	Apr-June		590
CLARK FORK RIVER					
Missoula (above)	1920	105	Apr-Sept	2016	1823
	1720	106	Apr-July	1831	1624
	1490	106	Apr-June	1595	1404

(2) Adjusted for storage in Lake Koocanusa.

(3) Sum Flint Creek at Maxville and Boulder Creek at Maxville.

(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
WEST FORK BITTERROOT RIVER					
Conner (near) (5)	205	119	Apr-Sept		172
	190	122	Apr-July		156
BITTERROOT RIVER					
Darby (near)	685	117	Apr-Sept	732	584
	640	118	Apr-July	670	542
	565	118	Apr-June	589	479
SKALKAHO CREEK					
Hamilton (near)	59	104	Apr-Sept		56.6
	52	105	Apr-July		49.6
BURNT FORK CREEK					
Stevensville (near) (10)	38.7	110	Apr-Sept		35.3
	34.0	110	Apr-July		31.0
BITTERROOT RIVER					
Missoula (at) (6)	1630	107	Apr-Sept	732	1527
	1520	108	Apr-July	670	1412
	1320	107	Apr-June	589	1236
CLARK FORK RIVER					
Missoula (below)	3550	106	Apr-Sept		3350
	3240	107	Apr-July		3036
	2810	106	Apr-June		2640
ST. REGIS RIVER					
St. Regis (near)	370	114	Apr-Sept		325
	350	114	Apr-July		308
CLARK FORK RIVER					
St. Regis (at)	4700	104	Apr-Sept	5824	4507
	4300	105	Apr-July	5358	4087
	3700	104	Apr-June	4633	3563
NORTH FORK FLATHEAD RIVER					
Columbia Falls (near)	2060	103	Apr-Sept		1991
	1860	103	Apr-July		1813
	1600	103	Apr-June		1551
MIDDLE FORK FLATHEAD RIVER					
West Glacier (near)	1780	93	Apr-Sept	2601	1917
	1660	94	Apr-July	2413	1768
	1420	94	Apr-June	1973	1514
SOUTH FORK FLATHEAD RIVER					
Columbia Falls (near) (7)	2300	97	Apr-Sept	3092	2378
	2150	96	Apr-July	2946	2240
	1900	96	Apr-June	2496	1984

(5) Adjusted for storage in Painted Rocks Reservoir.

(6) Difference in observed flow Clark Fork above and below Missoula.

(7) Adjusted for storage in Hungry Horse Reservoir.

(10) Adjusted for diversion into Sunset Highline Canal.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
FLATHEAD RIVER					
Columbia Falls (at) (7)	6200	97	Apr-Sept	8649	6421
	5800	97	Apr-July	8056	5942
	5050	98	Apr-June	6667	5151
SWAN RIVER					
Big Fork (near)	710	99	Apr-Sept		717
	630	100	Apr-July		630
FLATHEAD RIVER					
Polson (near) (8)	7400	97	Apr-Sept	10341	7648
	6900	97	Apr-July	9718	7082
	5900	97	Apr-June	8062	6113
CLARK FORK RIVER					
Plains (near) (8)	12600	100	Apr-Sept	16349	12601
	11540	100	Apr-July	15128	11523
	9900	100	Apr-June	12596	9934
THOMPSON RIVER					
Thompson Falls (near)	305	110	Apr-Sept		277
	275	111	Apr-July		248
PROSPECT CREEK					
Thompson Falls (at)	160	109	Apr-Sept		147
	150	109	Apr-July		137
CLARK FORK RIVER					
Whitehorse Rapids (at) (9)	14200	101	Apr-Sept		14336
	13050	102	Apr-July		13086
	11200	101	Apr-June		11325

(7) Adjusted for storage in Hungry Horse Reservoir.

(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

(9) Adjusted for storage in Hungry Horse, Flathead Lake, and Noxon Rapids Reservoirs.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

## MISSOURI RIVER BASIN

BEAVERHEAD RIVER					
Grant (near) (11) (12)	168	116	Apr-Sept	151	145
	150	118	Apr-July	116	127
RUBY RIVER					
Alder (near)	99.0	105	Apr-Sept		93.9
	84.0	106	Apr-July		79.4
BIG HOLE RIVER					
Melrose (near)	850	114	Apr-Sept		748
	790	114	Apr-July		694
BIRCH CREEK					
Glen (near)	15.2	111	Apr-Sept		13.7
	12.8	111	Apr-July		11.5
JEFFERSON RIVER					
Silver Star (at) (12)	1080	111	Apr-Sept		970
	960	111	Apr-July		865
WILLOW CREEK					
Harrison (near)	21.0	111	Apr-Sept		18.9
	19.0	111	Apr-July		17.1
MADISON RIVER					
Grayling (near) (13)	515	107	Apr-Sept	605	480
	410	110	Apr-July	486	374
MADISON RIVER					
McAllister (near) (14)	915	111	Apr-Sept	1025	828
	735	113	Apr-July	840	652
GALLATIN RIVER					
Gateway (near)	580	109	Apr-Sept		531
	500	111	Apr-July		451

- (11) Adjusted for storage in Lima Reservoir.  
 (12) Adjusted for storage in Clark Canyon Reservoir.  
 (13) Adjusted for storage in Hebgen Lake.  
 (14) Adjusted for storage in Hebgen and Ennis Lakes.





# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
HYALITE CREEK					
Bozeman (near) (15)	47.0	106	Apr-Sept		44.2
	41.0	107	Apr-July		38.2
GALLATIN RIVER					
Logan (at)	630	110	Apr-Sept		573
	540	111	Apr-July		487
MISSOURI RIVER					
Toston (at) (16)	2750	113	Apr-Sept	2742	2432
	2400	114	Apr-July	2410	2109
SHEEP CREEK					
White Sulphur Springs (near)	20.7	100	Apr-Sept	29.7	20.6
	18.0	100	Apr-July	26.3	18.0
SUN RIVER					
Gibson Dam (at) (17)	515	87	Apr-Sept	624	590
	470	87	Apr-July	569	541
BELT CREEK					
Monarch (near)	130	106	Apr-Sept		123
	120	106	Apr-July		113
MISSOURI RIVER					
Fort Benton (at) (18)	3900	106	Apr-Sept		3690
	3350	107	Apr-July		3123
TWO MEDICINE CREEK					
Browning (near) (19)	235	93	Apr-Sept		253
	225	94	Apr-July		240
BADGER CREEK					
Browning (near)	116	89	Apr-Sept		130
	100	88	Apr-July		113
MARIAS RIVER					
Shelby (near) (20)	510	91	Apr-Sept	554	559
	490	91	Apr-July	518	538

- (15) Adjusted for storage in Middle Creek Reservoir.
- (16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.
- (17) Adjusted for storage in Gibson Reservoir and diversions.
- (18) Adjusted for storage in Canyon Ferry Reservoir.
- (19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.
- (20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances, and Swift Reservoirs.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
MISSOURI RIVER					
Virgelle (at) (21)	4550	105	Apr-Sept	4342	
	3950	106	Apr-July	3742	
SOUTH FORK JUDITH RIVER					
Utica (near)	15	101	Apr-Sept	14.9	
	14	102	Apr-July	13.7	
MISSOURI RIVER					
Landusky (near) (21)	5000	106	Apr-Sept	4739	
	4350	107	Apr-July	4068	
NORTH FORK MUSSELSHELL RIVER					
Delpine (near)	6.7	108	Apr-Sept	6.2	
	5.7	106	Apr-July	5.4	
SOUTH FORK MUSSELSHELL RIVER					
Martinsdale (above)	53	106	Apr-Sept	50.1	
	50	106	Apr-July	47.3	
MISSOURI RIVER					
Fort Peck Dam (below) (22)	4900	107	Apr-Sept	4598	
	4350	107	Apr-July	4069	
MILK RIVER					
Eastern Crossing (at)	260	100	Apr-Sept	260	
MISSOURI RIVER					
Wolf Point (near) (22)	5300	108	Apr-Sept	4898	
	4700	108	Apr-July	4361	
MISSOURI RIVER					
Williston, N.D. (near) (29)	12500	106	Apr-Sept	11778	
	11200	107	Apr-July	10437	

## SASKATCHEWAN RIVER BASIN

ST. MARY RIVER					
Babb (near) (30)	490	100	Apr-Sept	489	
	425	102	Apr-July	421	

- (21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
- (22) Adjusted for storage in Canyon Ferry, Tiber, and Fort Peck Reservoirs.
- (29) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen, and Yellowtail Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.
- (30) Adjusted for storage in Lake Sherburne.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

## YELLOWSTONE RIVER BASIN

YELLOWSTONE RIVER					
Corwin Springs (at)	2050	103	Apr-Sept	2720	1996
	1720	103	Apr-July	2335	1662
YELLOWSTONE RIVER					
Livingston (near)	2420	104	Apr-Sept		2317
	2020	105	Apr-July		1926
BOULDER RIVER					
Big Timber (at)	405	107	Apr-Sept		379
	380	109	Apr-July		350
STILLWATER RIVER					
Absarokee (near) (25)	625	106	Apr-Sept		591
	540	109	Apr-July		494
CLARKS FORK RIVER					
Belfry (near)	625	103	Apr-Sept		607
	565	103	Apr-July		546
ROCK CREEK					
Red Lodge (near)	115	105	Apr-Sept	138	110
	90	107	Apr-July	117	84.0
YELLOWSTONE RIVER					
Billings (at)	4570	108	Apr-Sept	5449	4246
	3945	109	Apr-July	4659	3613
BIGHORN RIVER					
St. Xavier (near) (26)	1900	103	Apr-Sept		1849
	1750	103	Apr-July		1706
LITTLE BIGHORN RIVER					
Lodgegrass (near) (28)	150	103	Apr-Sept		146
	135	105	Apr-July		129
YELLOWSTONE RIVER					
Miles City (at) (27)	6650	104	Apr-Sept		6378
	5900	106	Apr-July		5555
YELLOWSTONE RIVER					
Sidney (near) (27)	7050	106	Apr-Sept		6665
	6350	108	Apr-July		5895

(25) Adjusted for storage in Mystic Lake.

(26) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake, and Yellowtail Reservoirs.

(27) Adjusted for storage in Buffalo Bill, Boysen, and Yellowtail Reservoirs.

(28) Sum Little Bighorn below Pass Creek and Lodgegrass Creek near Wyola.





## SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
ABUNDANCE LAKE	8800	3/31	65	21.2	31.8	20.9
AMBROSE	6480	3/31	52	15.3	16.4	13.8
ARCH FALLS	7350	3/27	58	16.6	14.4	14.0
BALD EAGLE PEAK	5700	3/27	183	70.2	92.0	68.0
BALD RIDGE	7500	3/31	61	17.4	13.2	14.0
BANFIELD MOUNTAIN	5600	3/28	82	30.0	36.2	25.5
BANFIELD MOUNTAIN PILLOW	5600	3/28	SP	26.5	33.0	21.8
BARRE CREEK	5500	4/01	144	59.1	75.0	49.4
BARRE MIDWAY	4600	4/01	125	49.8	54.1	37.7
BARRE TRAIL	3800	4/02	45	15.3	15.4	9.6
BASSOO PEAK	5150	3/27	50	16.4	14.6	12.0
BATTLE RIDGE	6020	3/25	38	10.9	7.5	7.4
BEAR BASIN	8150	3/26	76	24.8	28.2	22.4
BEAR MOUNTAIN (ID)	5400	3/26	182	70.2	-	65.7
BEAR PAW SKI AREA	5200	3/28	38	8.6	8.4	6.3
BERRY MEADOW	7000	3/24	34	9.0	11.1	8.3
BIG COULEE	5100	3/31	41	8.4	8.5	-
BIG CREEK	6750	3/26	123	43.5	59.1	49.7
BIG SKY M.V.	7450	3/26	58	15.8	23.9	-
BIG SNOWY	7150	4/01	80	25.8	24.4	19.9
BIG SPRINGS (ID)	6500	3/28	71	22.6	30.0	21.3
BLACK BEAR	7950	3/31	117	43.4	66.8	-
BLACK BEAR PILLOW	7950	3/31	SP	38.0	60.2	-
BLACK PINE	7100	3/27	49	14.6	18.3	14.0
BLACK PINE PILLOW	7100	3/27	SP	15.6	17.3	14.2
BLOODY DICK	7600	3/27	57	17.0	17.8	14.0
BLUE LEDGE MINE (ID)	6700	3/31	68	23.4	23.3	17.2
BOTS SOTS	8000	3/31	46	11.0	7.7	-
BOULDER MOUNTAIN	7950	3/24	64	21.1	27.8	19.5
BRANHAM LAKES	8850	3/31	86	30.8	44.5	31.6
BRIDGER BOWL	7250	3/25	82	26.7	32.0	30.8
BRIDGER BOWL PILLOW	7250	3/25	SP	24.0	34.1	29.6
BRISTOW CREEK	3900	3/28	47	17.3	17.6	13.4
BRUSH CREEK TIMBER	5000	3/26	43	12.6	13.0	10.9
BULL MOUNTAIN	6600	4/01	35	8.6	9.0	-
CALL ROAD	8050	4/01	52	14.5	17.8	12.2
CALVERT CREEK	6450	3/28	46	13.4	16.1	10.6
CAMP CREEK (ID)	6800	3/29	52	14.6	10.9	10.4
CAMP MISERY	6400	3/27	133	52.2	71.1	49.6
CAMP SENIA	7890	3/31	37	9.2	4.6	7.2
CANYON (WY)	7750	4/01	53	14.4	19.5	16.5
CARROT BASIN	9000	3/31	112	41.2	57.9	38.1
CARROT BASIN PILLOW	9000	3/31	SP	27.1	40.4	28.6
CARTER CREEK	7400	3/29	28	6.3	6.8	6.4
CEDAR GROVE	4100	3/27	56	17.5	19.6	12.7
CHESSMAN RESERVOIR	6200	3/31	28	7.2	4.5	3.3
CLOVER MEADOW	8600	4/01	67	21.2	25.0	18.7
COLE CREEK	7850	3/28	67	19.6	15.2	-



## SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Elevation				Last Year	Average
COLE CREEK PILLOW	7850	3/28	SP	18.4	-	-
COLLEY CREEK	6300	3/31	46	11.9	8.2	-
COMBINATION	5600	3/27	31	7.4	9.3	8.1
COMBINATION PILLOW	5600	3/27	SP	7.9	8.3	-
COOKE STATION	8150	3/29	68	20.7	23.1	20.5
COPPER BOTTOM	5200	3/28	40	11.1	15.0	-
COPPER CAMP	6950	3/28	86	30.7	42.0	-
COPPER CREEK	5700	3/28	52	16.2	19.0	16.3
COPPER LAKE CREEK	6100	3/28	75	26.3	31.6	-
COPPER MOUNTAIN	7700	4/02	50	15.5	14.7	12.3
COTTONWOOD CREEK	6400	3/26	34	9.6	9.6	-
COYOTE HILL	4200	3/27	43	14.5	13.4	10.5
CREVICE MOUNTAIN	8400	3/28	48	12.4	14.0	10.6
CRYSTAL LAKE	6100	4/01	66	17.5	15.8	14.5
DAD CREEK LAKE	8400	4/01	55	16.0	19.6	15.3
DAISY PEAK	7600	3/28	49	12.9	13.1	11.6
DALY CREEK	5780	3/26	50	13.8	-	-
DARKHORSE LAKE	8600	4/01	88	35.2	39.7	28.0
DAVIS CREEK	5400	3/28	87	29.9	39.9	26.5
DEADMAN CREEK	6450	3/28	0	11.8	13.3	12.7
DESERT MOUNTAIN	5600	3/28	52	16.4	22.0	17.2
DEVILS SLIDE	8100	3/27	83	24.1	25.5	24.7
DISCOVERY BASIN	7050	3/28	46	12.8	-	-
DIVIDE	7800	4/01	47	13.6	16.6	11.6
DIX HILL	6400	3/31	39	11.8	10.5	-
EAGLE CREEK	7000	3/31	59	18.8	18.4	14.9
EAST FORK R.S.	5400	3/31	29	8.7	8.1	6.7
EL DORADO MINE	7800	3/26	76	22.4	23.7	23.1
ELK HORN SPRINGS	7800	4/01	39	10.8	13.1	9.7
ELK PEAK	8000	3/28	65	20.4	19.2	19.2
FATTY CREEK	5500	3/26	83	26.8	32.1	24.8
FISHER CREEK	9100	3/29	117	40.2	56.0	38.5
FISHER CREEK PILLOW	9100	3/29	SP	38.1	53.1	35.0
FLEECER RIDGE	7500	4/01	45	13.0	15.0	-
FOOLHEN	8280	3/31	57	18.2	26.0	18.2
FOREST LAKE	6400	3/31	54	17.0	-	12.7
FOUR MILE	6900	3/28	37	9.7	12.0	9.1
FRED BURR PASS	8000	3/27	80	25.3	25.3	28.2
FROHNER MEADOWS	6480	3/28	41	9.8	11.3	-
FROHNER MEADOWS PILLOW	6480	3/28	SP	9.7	10.9	-
GARVER CREEK	4250	3/28	44	14.8	16.9	12.8
GARVER CREEK PILLOW	4250	3/28	SP	12.8	16.6	10.4
GIBBONS PASS	7100	3/26	88	28.6	32.9	23.7
GOLD CREEK LAKE	7200	3/26	59	16.2	18.2	17.1
GOLD STONE	8100	3/27	66	21.2	22.4	17.9
GRASSHOPPER	7000	3/28	30	7.6	6.4	5.9
GRAVES CREEK	4300	3/24	64	20.1	26.9	19.4
GRIFFIN CREEK DIVIDE	5150	3/26	50	16.8	15.6	12.4
GRIZZLY PEAK	8400	3/28	59	17.0	13.7	17.5
HALVERSON CREEK (ID)	4850	3/26	144	53.6	-	50.7





# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Elevation				Last Year	Average
HAWKINS LAKE	6450	3/29	101	36.6	51.7	32.8
HAWKINS LAKE PILLOW	6450	3/29	SP	33.0	50.3	30.4
HAYMAKER	8050	4/01	53	13.9	-	13.6
HEART LAKE TRAIL	4800	4/01	86	28.7	33.0	23.4
HELL ROARING DIVIDE	5770	4/02	95	36.7	48.6	34.0
HIGHWOOD DIVIDE	5650	3/31	45	11.0	10.0	-
HIGHWOOD STATION	4600	3/31	30	7.0	4.2	-
HOLBROOK	4530	3/30	39	11.6	13.2	10.5
HOOD MEADOW	6600	3/27	51	14.2	12.4	12.0
HOODOO BASIN	6000	4/01	149	56.8	73.6	53.8
HOODOO BASIN PILLOW	6000	3/31	SP	51.9	-	53.3
HOODOO CREEK	5900	4/01	142	51.8	67.7	50.3
INDEPENDENCE	7850	4/01	70	22.8	25.8	19.1
INTERGAARD	6450	4/01	39	10.9	11.2	9.2
ISLAND PARK (ID)	6310	3/28	68	20.8	22.3	16.4
JACK CREEK	7500	3/26	34	7.7	7.4	6.1
JAHNKE LAKE TRAIL	7200	3/27	47	13.1	14.1	9.7
JOHNSON PARK	6450	3/28	35	9.2	6.2	7.2
KEELER CREEK	3300	3/26	54	20.3	-	11.1
KILGORE (ID)	6200	3/31	43	14.4	12.0	10.9
KING CREEK SADDLE	4550	4/01	23	5.1	.0	-
KING SPRINGS	4150	4/01	18	4.0	.0	-
KINGS HILL	7500	4/03	55	16.2	19.6	15.2
KISHENEHN	3890	3/26	40	10.5	10.5	8.4
KIT CARSON (ID)	5020	3/31	41	13.8	14.8	9.1
KIWANIS CAMP	3720	3/28	19	3.9	.1	-
LAKE CAMP (WY)	7850	1/31	39	9.3	12.7	9.9
LAKE CREEK	6100	4/01	38	11.2	7.8	7.5
LAKEVIEW CANYON	6930	3/31	54	16.2	16.8	13.6
LAKEVIEW RIDGE	7400	3/31	48	14.2	15.2	11.6
LEMHI PASS	7480	4/01	42	12.0	10.4	9.2
LEMHI RIDGE	8100	4/01	50	14.6	13.8	10.4
LICK CREEK	6860	3/27	50	13.1	10.5	10.6
LICK CREEK PILLOW	6860	3/27	SP	12.4	9.0	10.6
LITTLE PARK	7400	3/26	61	18.8	20.4	17.0
LOGAN CREEK	4300	3/26	37	10.4	9.8	8.0
LOLO PASS (ID)	5230	3/27	98	34.8	41.2	32.8
LONE MOUNTAIN	8880	3/26	84	25.4	-	-
LOOKOUT (ID)	5250	3/28	119	42.4	46.9	38.7
LOST HORSE	5940	3/28	106	38.2	48.8	33.7
LOST SOUL	4800	3/28	60	20.9	24.5	17.2
LOWER TWIN	7900	3/28	72	24.0	29.4	22.5
LUBRECHT FLUME	4800	3/28	31	9.0	8.8	5.1
LUBRECHT FLUME PILLOW	4800	3/28	SP	6.1	8.0	5.7
LUBRECHT FOREST # 3	5450	3/28	37	10.1	9.2	7.4
LUBRECHT FOREST # 4	4650	4/08	16	4.7	4.1	2.8
LUBRECHT FOREST # 6	4040	4/08	19	6.0	4.6	2.8
LUBRECHT HYDROPLOT	4200	3/28	26	8.2	7.8	3.2
MADISON PLATEAU	7750	3/31	71	26.1	35.6	22.3
MADISON PLATEAU PILLOW	7750	3/31	SP	24.9	37.6	23.2





# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Elevation				Last Year	Average
MARIAS PASS	5250	4/02	60	20.6	19.1	19.6
MAYNARD CREEK	6210	3/25	57	17.0	19.1	19.4
MAYNARD CREEK PILLOW	6210	3/25	SP	12.8	13.4	12.7
MEADOW CREEK PILLOW	4000	3/31	SP	10.2	-	-
MIDDLE MILL CREEK	7850	3/31	61	20.8	24.8	16.6
MILL CREEK	7500	3/31	64	18.8	12.7	14.3
MINERAL CREEK	4000	3/20	72	21.5	23.0	20.0
MISSION MOUNTAIN	5050	4/01	27	6.0	.0	-
MONUMENT PEAK	8800	4/01	92	30.6	36.2	27.8
MOOSE CREEK (ID)	6200	3/31	72	21.4	21.8	16.9
MOUNT LOCKHART	6400	3/28	70	23.2	29.4	25.0
MUDD LAKE	7650	3/28	66	22.6	28.2	23.0
NEW WORLD	6900	3/25	55	17.4	16.8	16.3
NEZ PERCE CAMP	5580	3/31	58	19.8	23.6	15.3
NEZ PERCE CREEK	6500	4/02	35	10.1	9.0	6.8
NEZ PERCE PASS	6570	3/31	67	24.1	25.4	17.3
NOISY BASIN	6040	3/27	128	48.6	62.3	-
NOISY BASIN PILLOW	6040	3/27	SP	40.0	-	-
NOISY CREEK	3600	3/27	26	7.1	3.9	-
NORRIS BASIN (WY)	7500	4/01	43	12.6	14.3	11.0
NORTH FK. ELK CREEK	6250	3/28	51	16.2	15.0	12.7
NORTH FK. ELK CREEK PILL	6250	3/28	SP	16.0	15.3	13.1
NORTH FORK JOCKO	6330	3/27	136	52.1	52.2	49.6
NORTH MEADOW	7500	3/25	40	10.2	12.8	9.2
NORTHEAST ENTRANCE	7400	4/01	42	13.4	11.4	9.5
NOTCH	8500	4/01	65	20.4	23.8	16.3
OPHIR PARK	7150	3/31	60	19.2	20.8	-
PALISADE CREEK	8250	3/28	84	30.0	44.1	31.4
PETERSON MEADOWS	7200	3/27	45	10.0	11.2	-
PETERSON MEADOWS PILLOW	7200	3/27	SP	11.5	12.0	-
PICKET PIN LOWER	6200	4/02	24	7.0	.0	-
PICKET PIN MIDDLE	7250	4/02	65	24.0	12.2	-
PICKET PIN UPPER	8100	4/02	75	25.6	23.3	-
PICNIC GROUNDS	6200	4/01	25	5.7	6.5	4.6
PIPESTONE PASS	7200	4/02	33	9.0	6.0	6.2
POORMAN CREEK	5100	3/27	114	41.3	52.8	38.0
POORMAN CREEK PILLOW	5100	3/27	SP	41.3	52.5	32.1
PORCUPINE R.S.	6500	3/31	41	11.2	7.2	8.1
POTOMAGETON PARK	7150	3/27	61	17.4	19.9	15.3
RED MOUNTAIN	6000	3/28	69	23.7	30.1	20.1
ROCK CREEK	5600	4/01	51	13.8	8.4	10.2
ROCKER PEAK	8000	3/24	53	15.4	16.8	16.7
ROCKER PEAK PILLOW	8000	3/24	SP	14.5	17.5	16.7
ROCKY BOY	4700	3/28	31	6.5	5.8	4.7
ROCKY BOY PILLOW	4700	3/28	SP	6.0	2.4	5.1
SACAJAWEA	6550	3/25	58	18.0	14.9	15.3
SADDLE MOUNTAIN	7940	3/27	93	30.3	35.4	26.4
SADDLE MOUNTAIN PILLOW	7940	3/27	SP	30.2	39.0	28.2
SAWTELL MOUNTAIN (ID)	8710	3/28	110	35.2	48.0	35.3
SENTINEL CREEK	8300	3/27	85	25.6	31.2	24.6



## SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
SHOWER FALLS	8100	3/27	94	29.3	34.6	26.1
SHOWER FALLS PILLOW	8100	3/27	SP	27.8	25.0	26.3
SILVER RUN	6630	3/31	33	7.4	-	-
SKALKAHO SUMMIT	7260	3/31	85	31.2	31.9	27.4
SLAG-A-MELT LAKE	8750	4/01	82	30.6	41.3	27.8
SLIDE ROCK MOUNTAIN	7100	3/29	60	18.4	22.6	18.0
SMUGGLER MINE	6960	3/31	45	13.8	14.8	11.1
SOUTH FORK SHIELDS	8100	3/31	85	28.6	29.4	26.1
SPUR PARK	8000	3/28	65	22.3	25.4	23.8
SPUR PARK PILLOW	8100	3/28	SP	22.5	26.3	23.5
STAHL PEAK	6050	3/24	113	39.8	58.4	41.4
STEMPLE PASS	6600	4/03	47	14.0	12.4	11.4
STORM LAKE	7780	3/27	52	14.0	14.0	15.0
STUART MILL	6500	4/01	36	9.8	8.9	7.5
SUCKER CREEK	3960	3/28	12	1.2	.1	-
SUGARLOAF	7350	3/26	44	11.9	11.7	-
SYLVAN PASS (WY)	7100	4/02	50	14.1	17.7	13.8
TARGHEE PASS (ID)	7000	3/28	59	17.5	18.0	16.2
TAYLOR ROAD	4080	3/28	28	5.9	.1	-
TEN MILE LOWER	6600	3/31	40	10.2	9.4	7.8
TEN MILE MIDDLE	6800	4/01	53	15.4	14.2	12.6
TEN MILE UPPER	8000	4/01	54	16.5	17.4	15.0
TEPEE CREEK	8000	4/01	62	19.8	20.4	16.4
TEPEE CREEK PILLOW	8000	4/01	SP	15.7	18.5	-
THUMB DIVIDE (WY)	7900	3/26	67	17.9	28.4	22.2
TIMBERLINE CREEK	8850	3/31	65	16.9	14.9	16.1
TRAIL CREEK	7090	4/01	40	11.6	10.6	9.0
TWELVEMILE CREEK	5600	3/28	78	26.0	34.4	21.1
TWELVEMILE CREEK PILLOW	5600	3/28	SP	21.8	30.9	18.6
TWIN LAKES	6510	3/28	128	46.8	59.0	43.7
TWIN LAKES PILLOW	6400	3/28	SP	45.9	55.4	42.7
VALLEY VIEW (ID)	6500	3/28	61	19.2	19.7	17.7
WALDRON	5600	3/28	41	11.6	13.0	12.2
WEASEL DIVIDE	5450	3/24	111	38.0	50.6	36.4
WEST ROSEBUD	7500	3/27	49	14.2	8.4	12.4
WEST YELLOWSTONE PILLOW	6700	3/29	SP	8.8	13.7	8.8
WHISKEY CREEK	6800	3/31	70	23.4	31.2	22.1
WHISKEY CREEK PILLOW	6800	3/31	SP	17.4	27.4	-
WHITE ELEPHANT (ID)	7700	3/28	87	27.7	42.2	-
WHITE MILL	8700	3/29	88	28.7	39.2	27.7
WHITE MILL PILLOW	8700	3/29	SP	26.2	34.9	-
WHITE PINE RIDGE	8850	4/01	30	5.9	6.7	5.7
WILLOW CREEK	6500	3/28	39	9.2	8.1	-



# SNOW

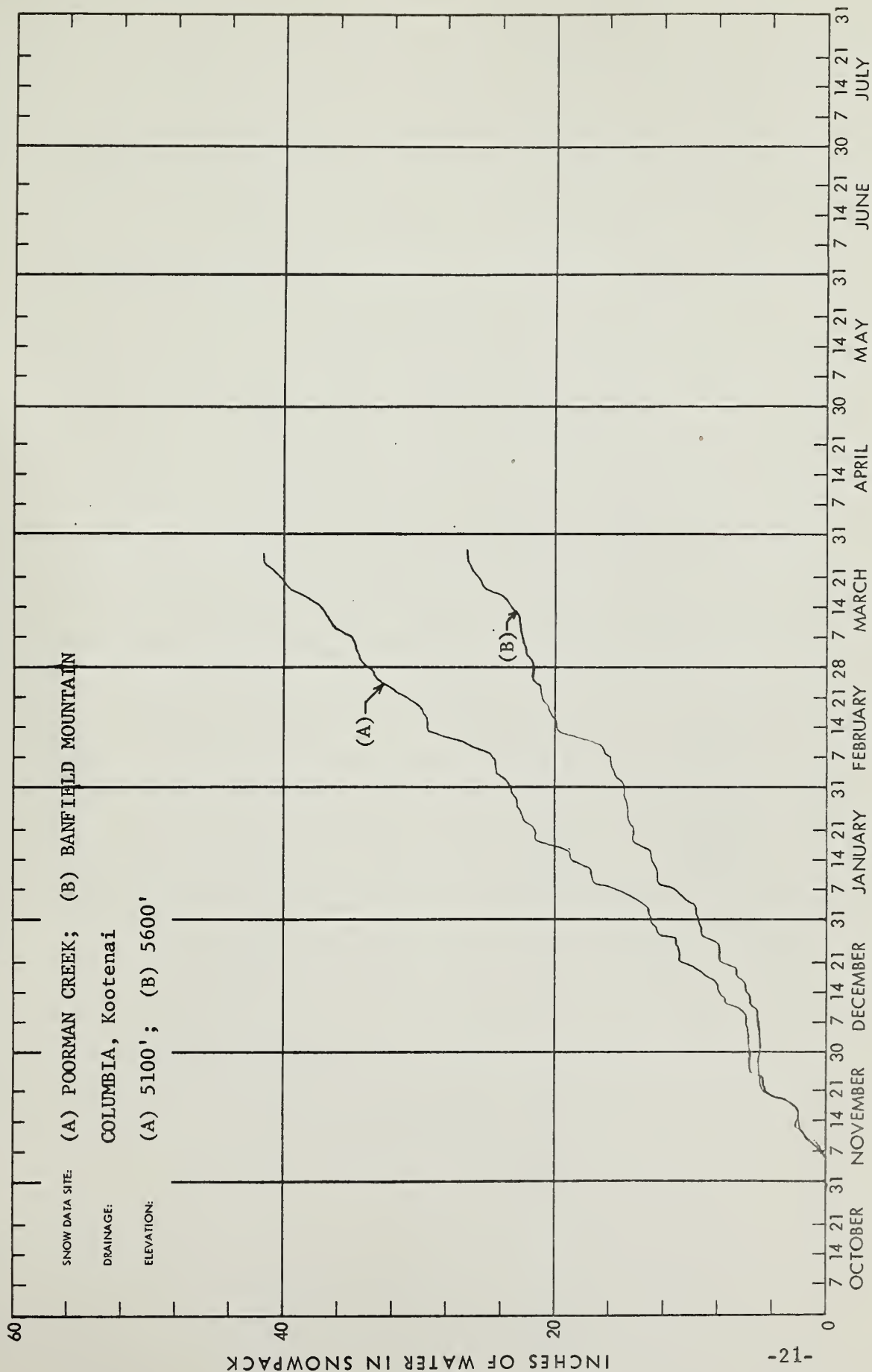
DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

## LATE ARRIVING DATA

BADGER PASS	6900	4/6	106	44.0	49.6	42.0
BEAVER LAKE	5900	4/6	72	27.4	33.4	25.1
BLUE LAKE	5900	4/6	80	30.0	36.0	28.2
CABIN CREEK	5200	4/1	27	7.0	7.9	7.4
FIVE BULL	5700	4/6	29	10.2	7.9	7.5
FREIGHT CREEK	6000	4/6	52	18.0	20.4	16.8
GOAT MOUNTAIN	7000	4/4	42	10.4	13.4	11.8
GUNSIGHT LAKE	6300	4/6	114	47.3	51.4	42.9
HEBGEN DAM	6550	4/2	52	15.6	16.0	11.6
SPOTTED BEAR	7000	4/6	54	17.2	22.2	15.8
TRINKUS LAKE	6100	4/6	120	49.7	56.0	46.5
TV MOUNTAIN	6800	4/4	66	22.0	24.6	20.3
TWENTY-ONE MILE	7150	4/2	64	20.3	28.4	17.9
TWIN CREEKS	3580	4/6	47	16.0	19.9	11.7
UPPER HOLLAND	6200	4/6	104	40.1	44.9	38.3
WALDRON PILLOW	5600	3/28	SP	9.0	11.9	12.1
WEST YELLOWSTONE	6700	4/2	41	11.8	19.2	11.4
WRONG CREEK	5700	4/2	48	15.6	16.9	16.2
WRONG RIDGE	6800	4/2	59	19.9	24.4	22.0



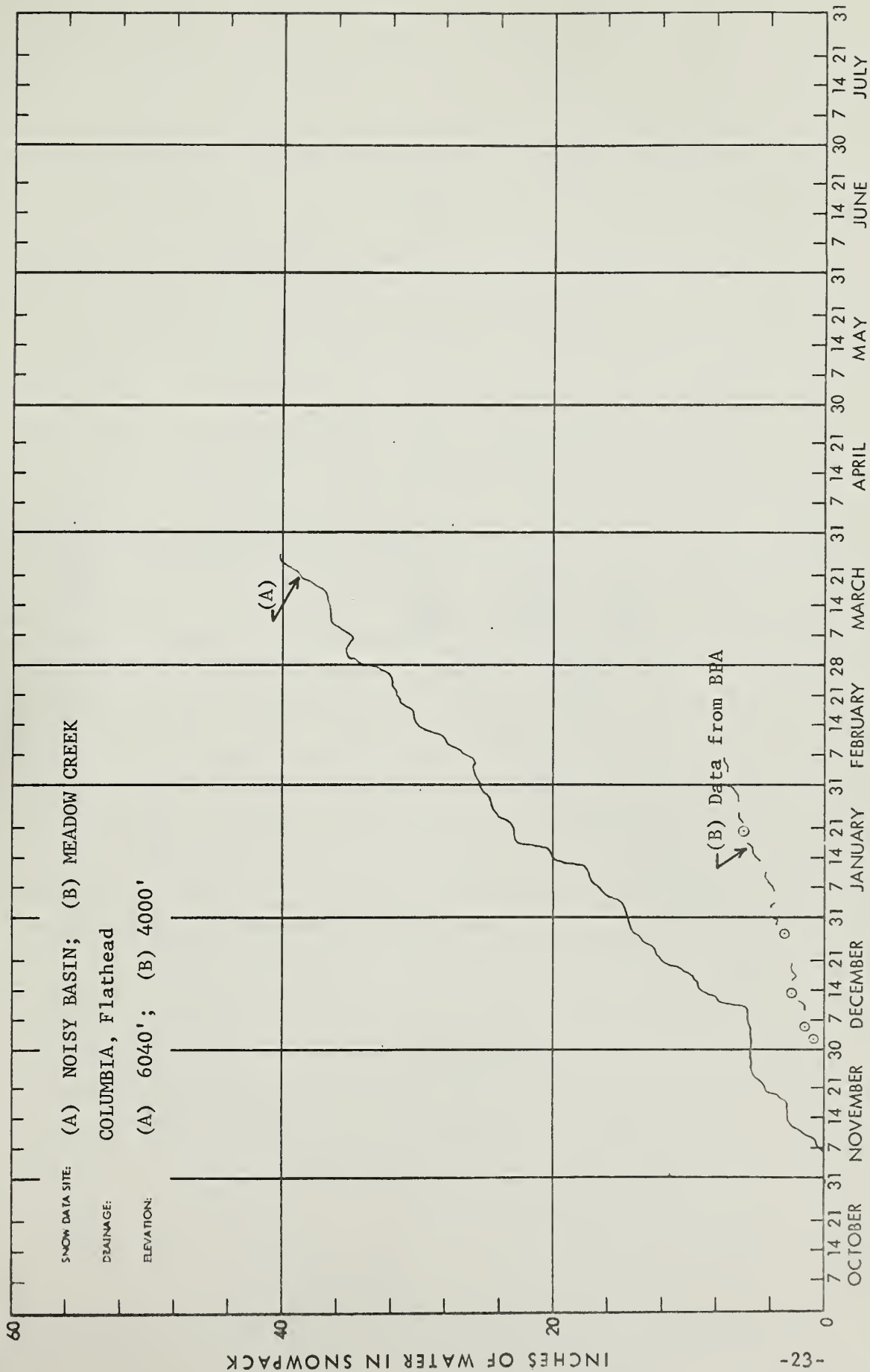






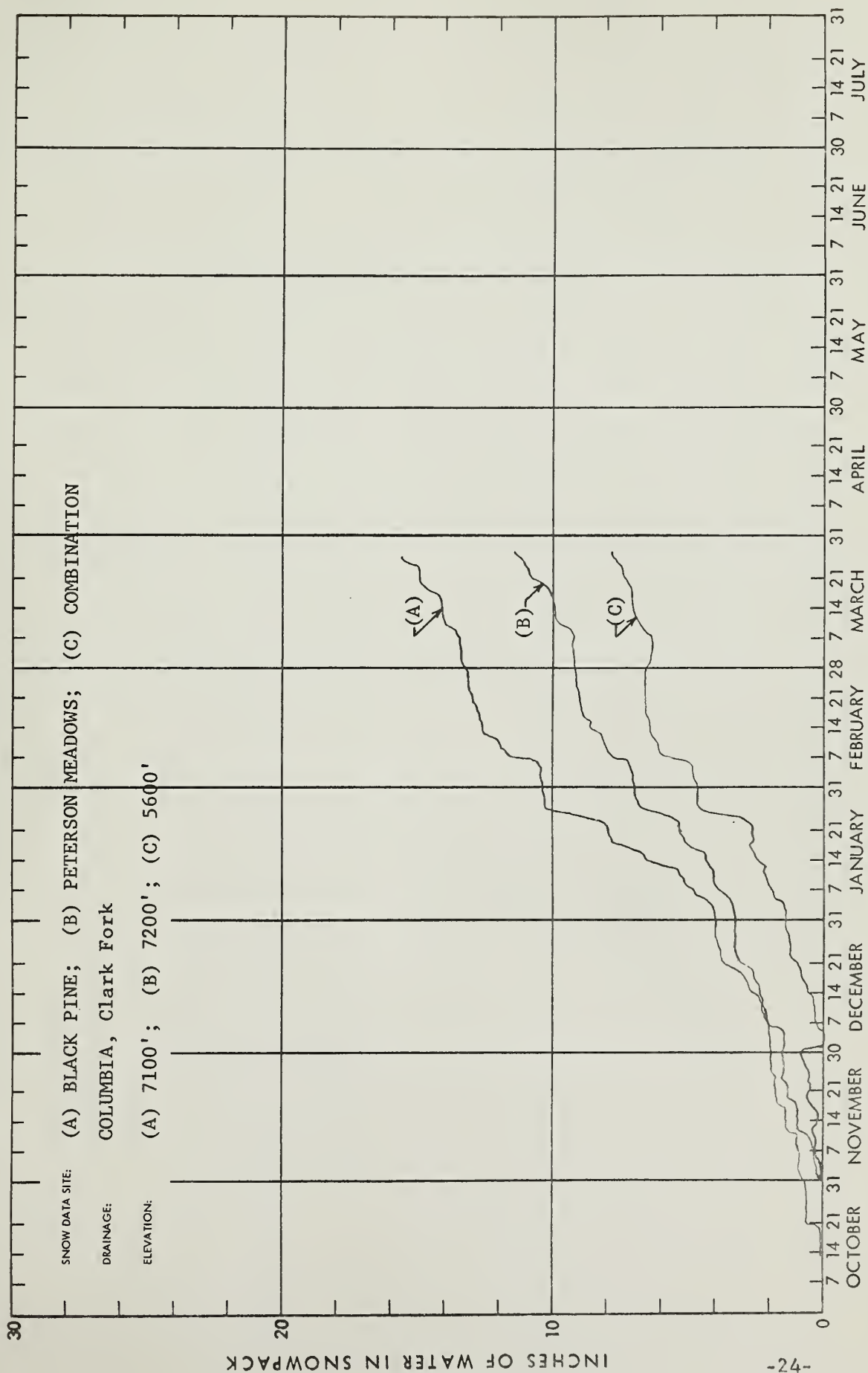




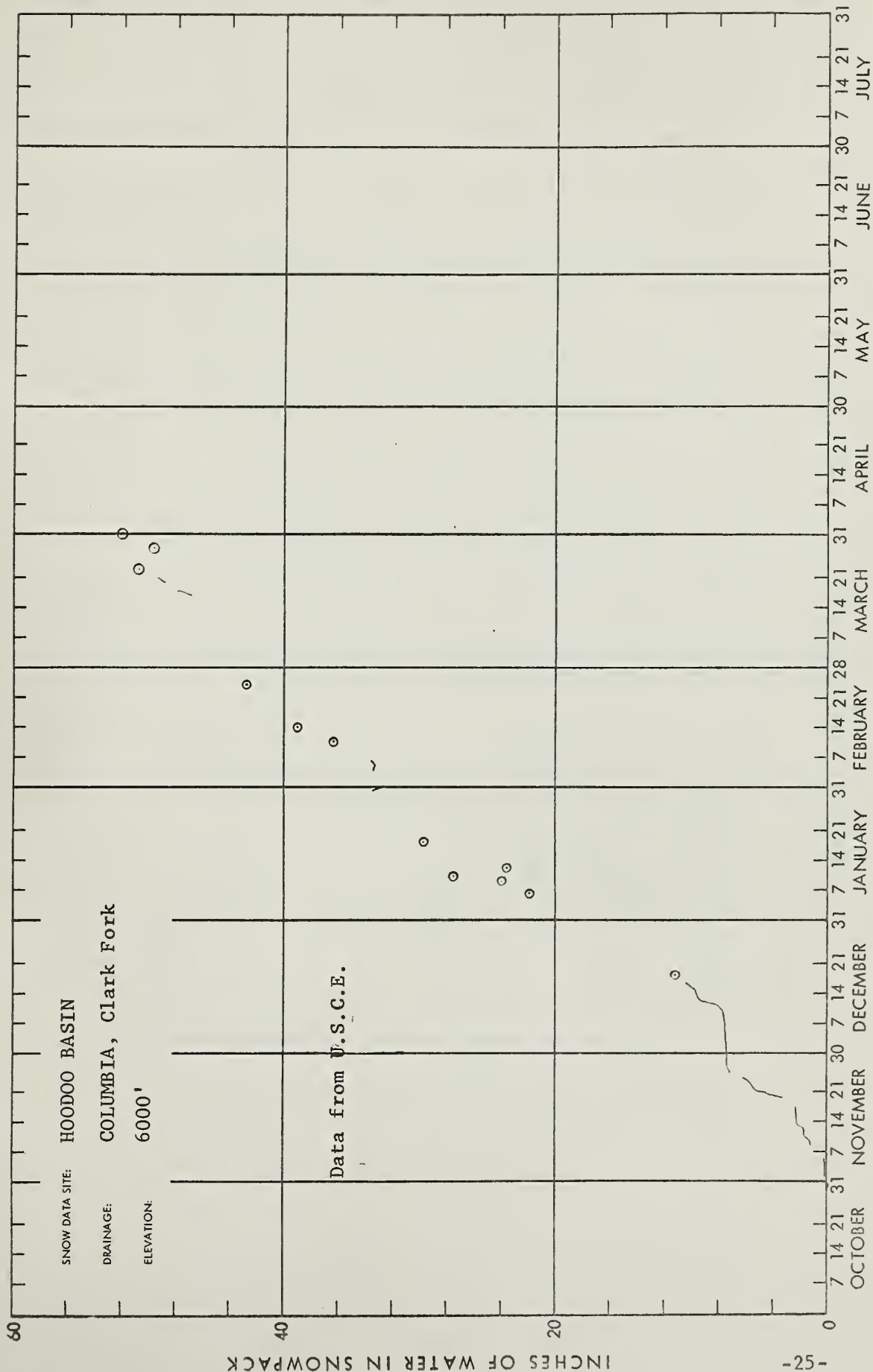




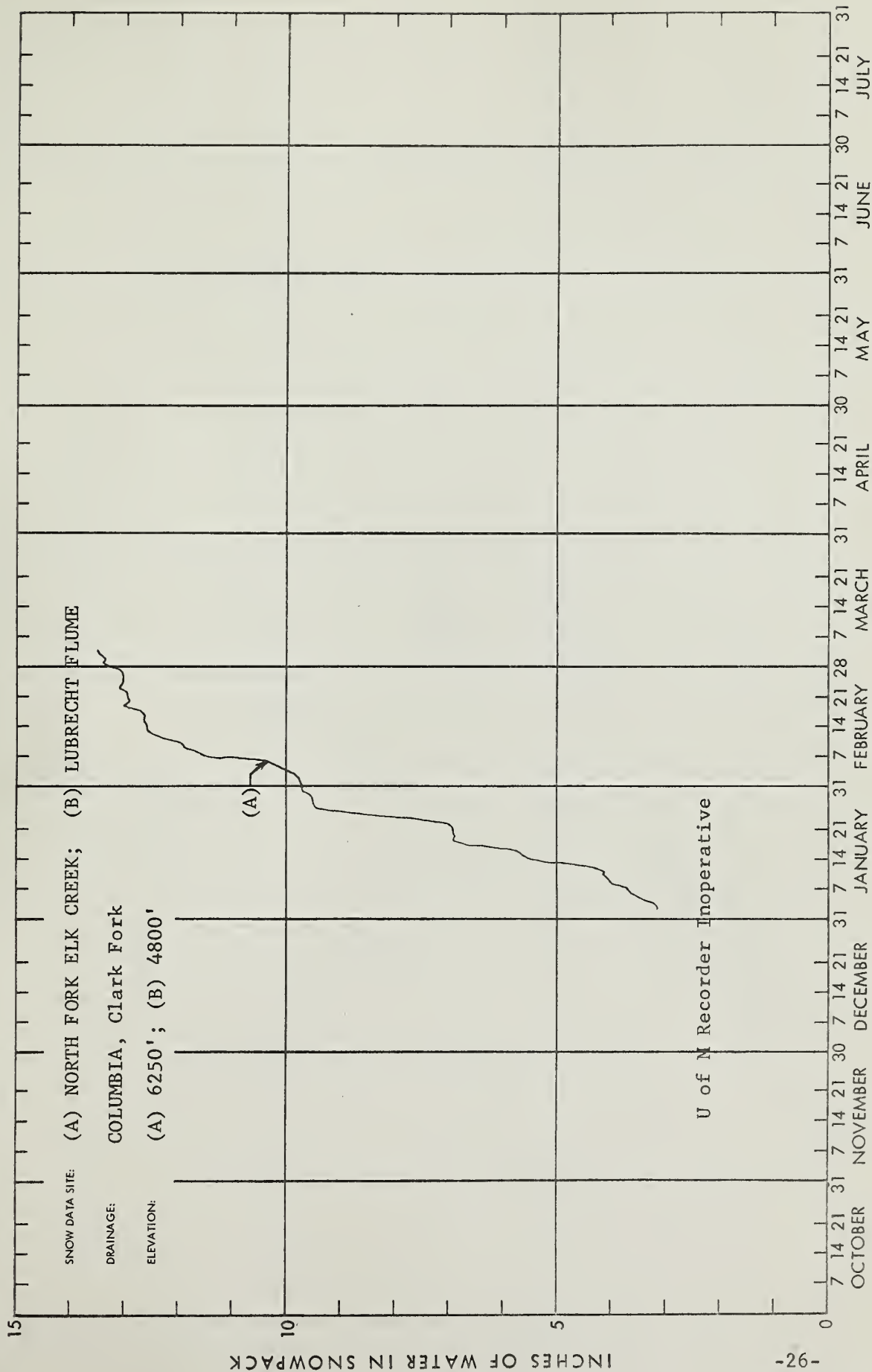






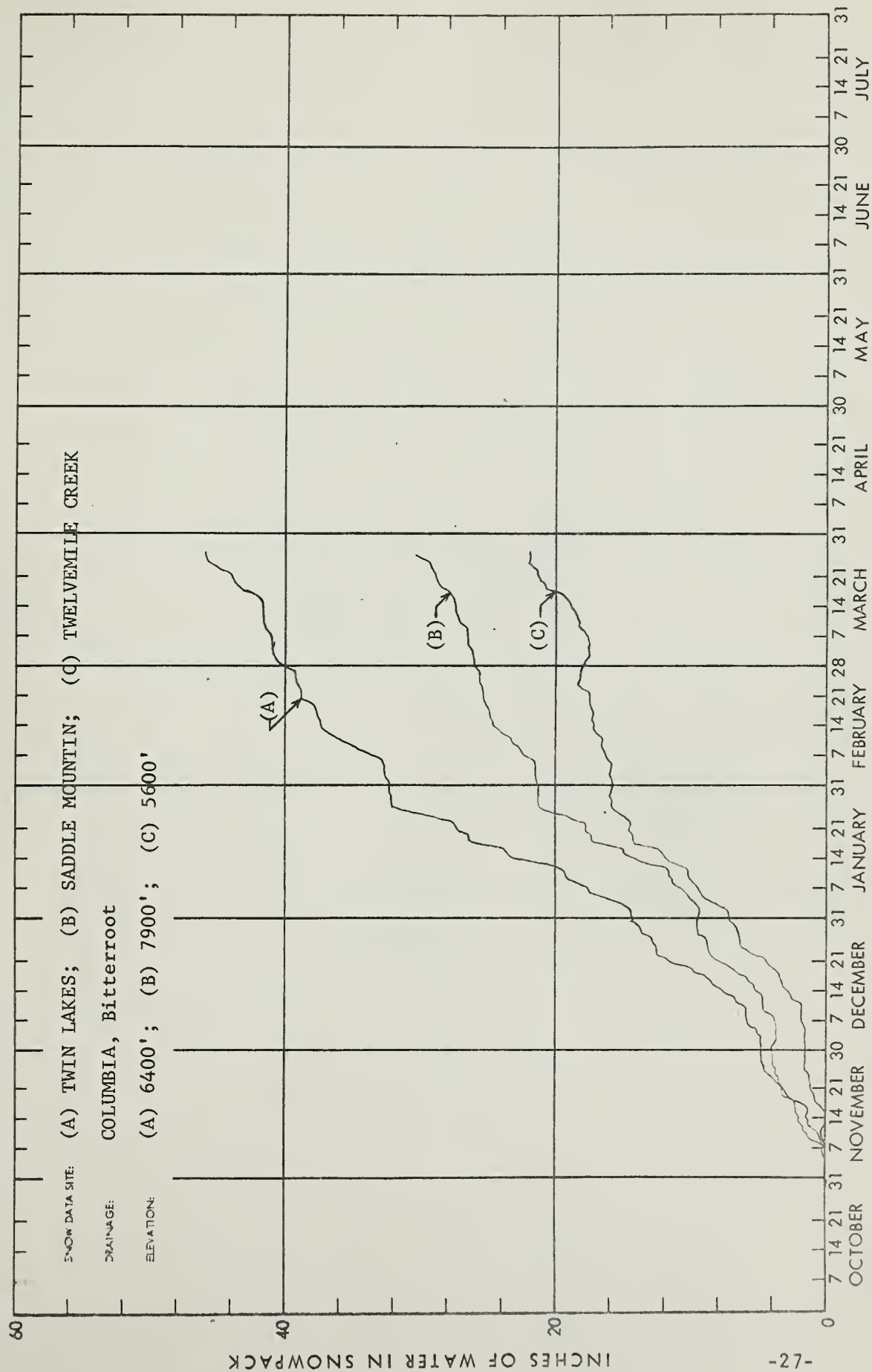




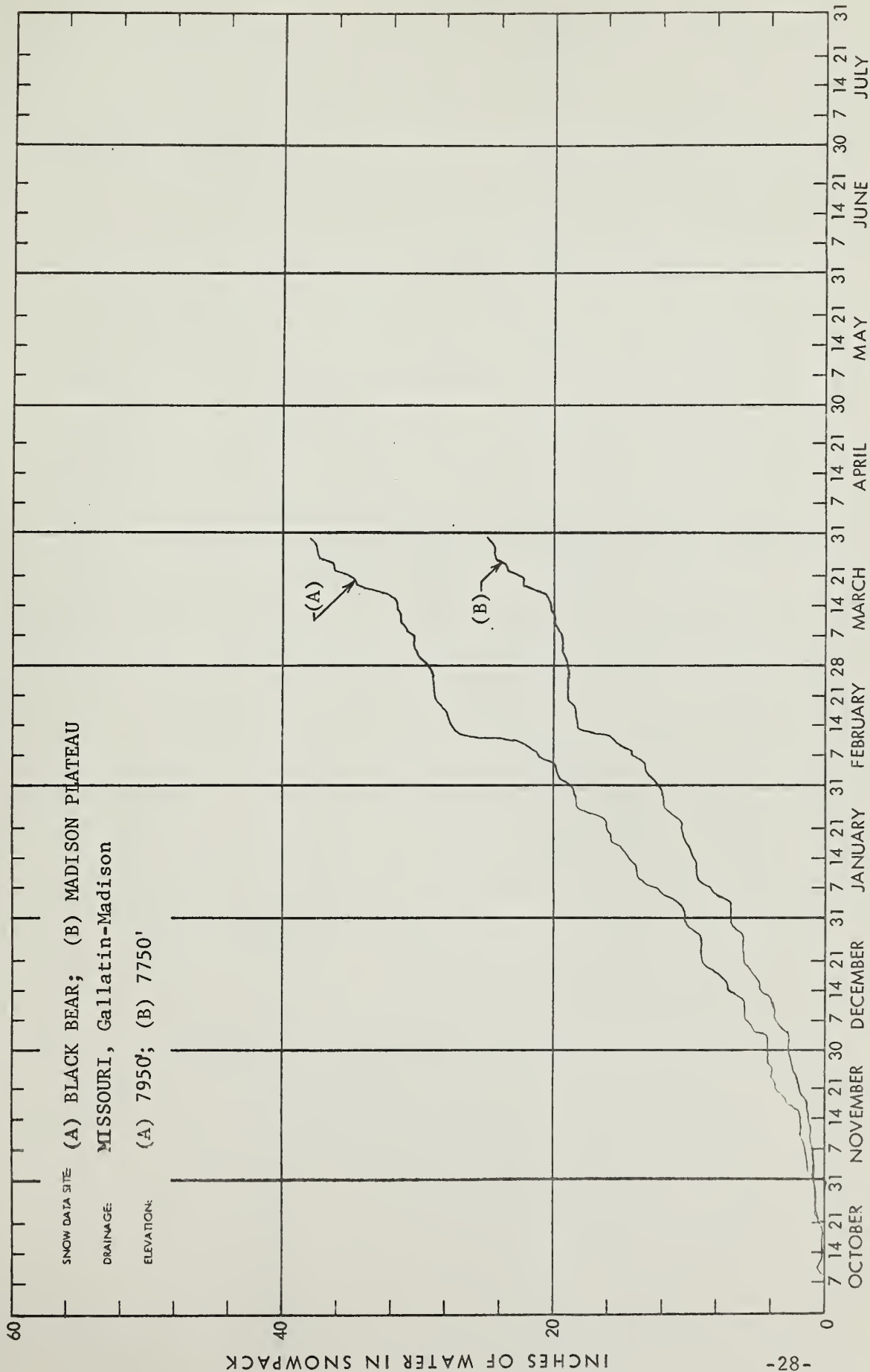




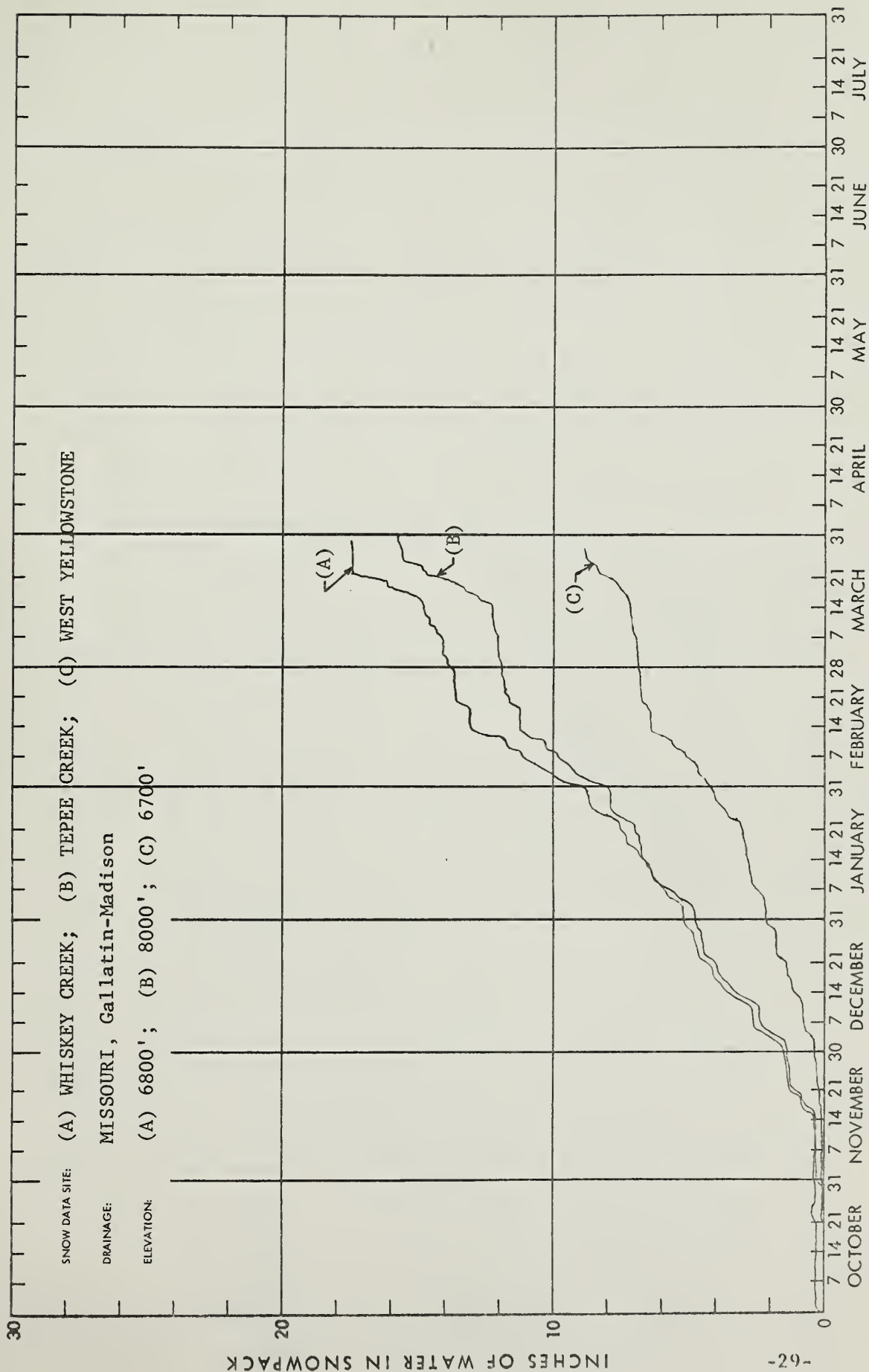






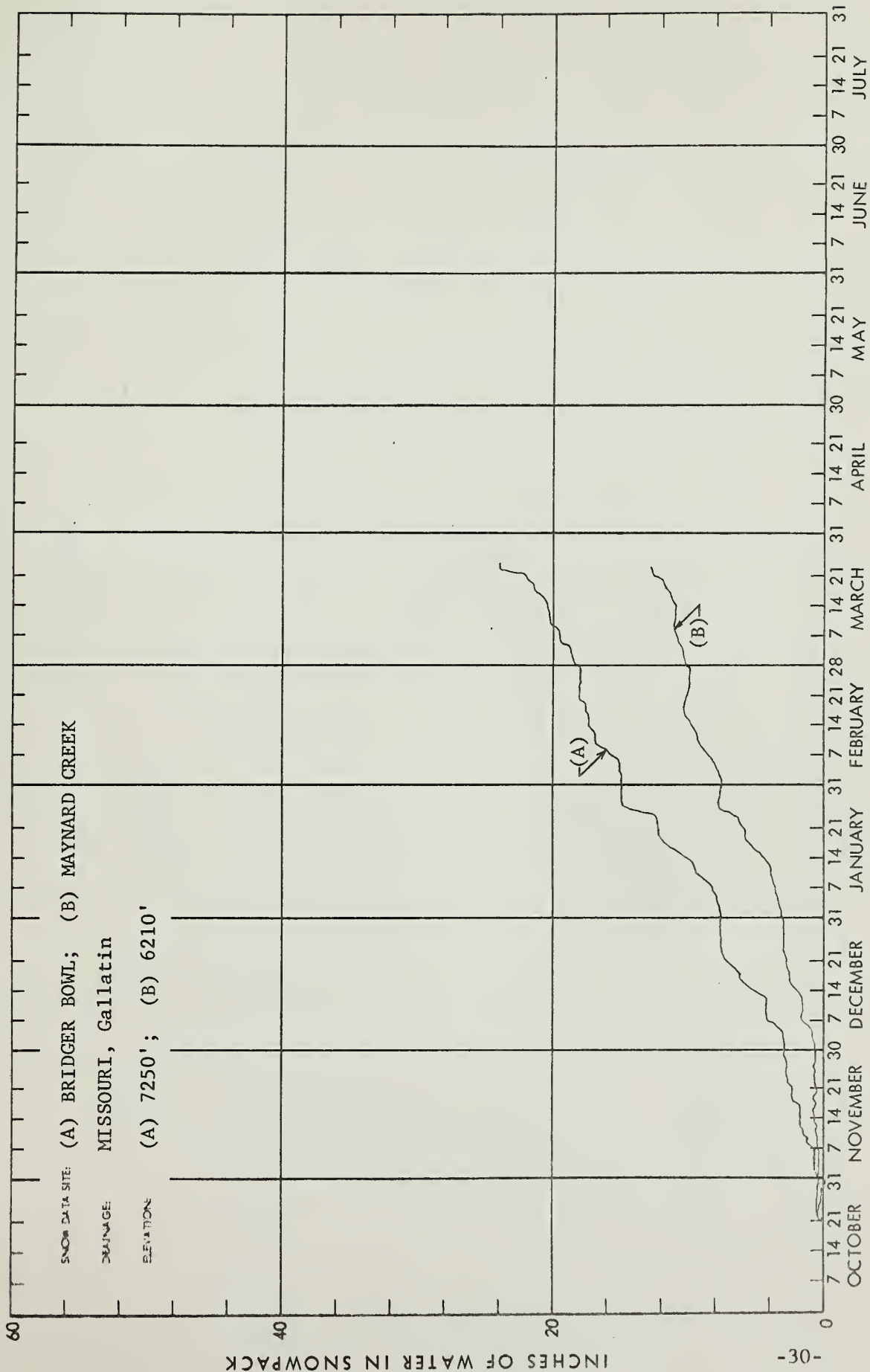




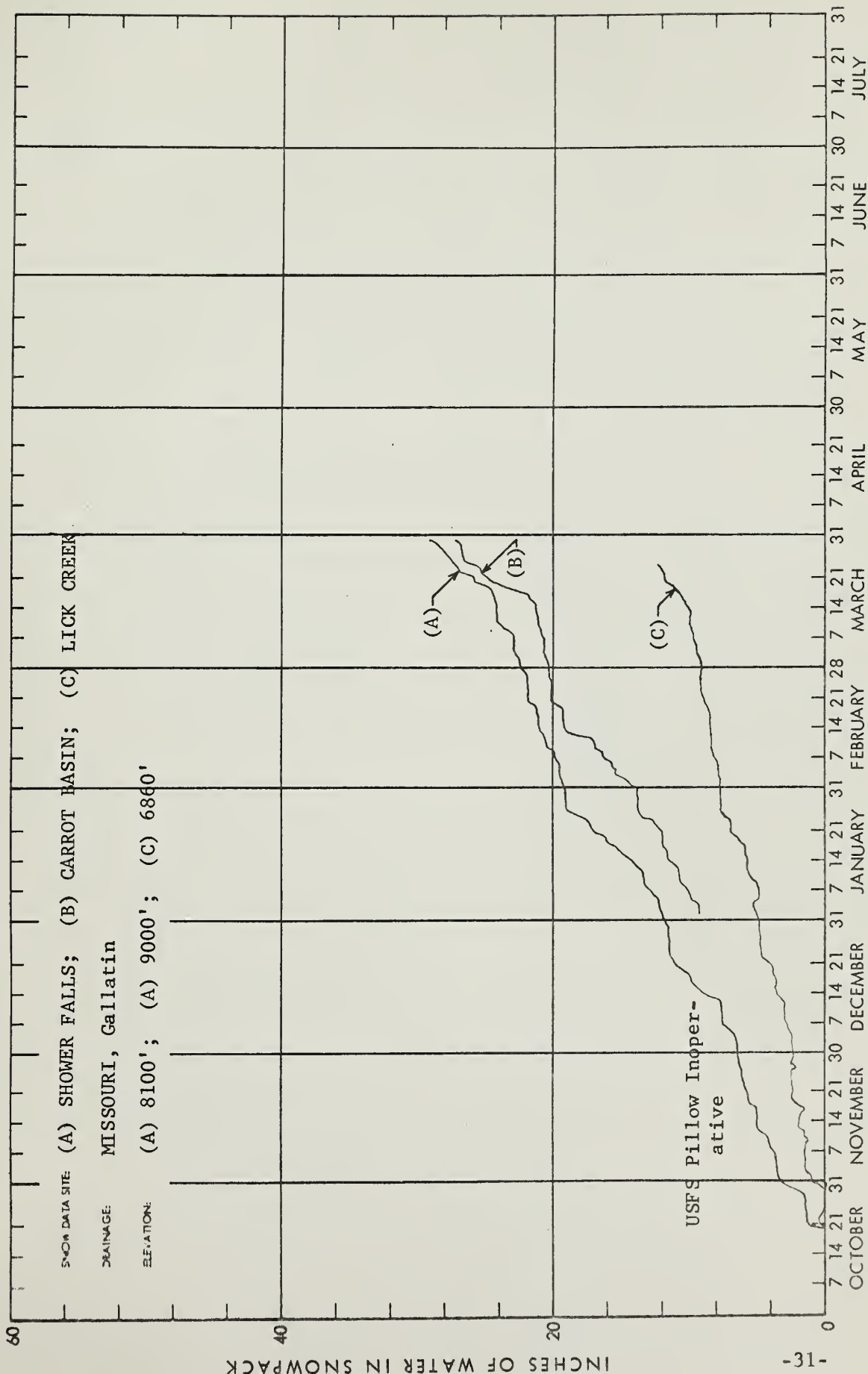














SNOW DATA SITE: (A) SPUR PARK; (B) DEADMAN CREEK

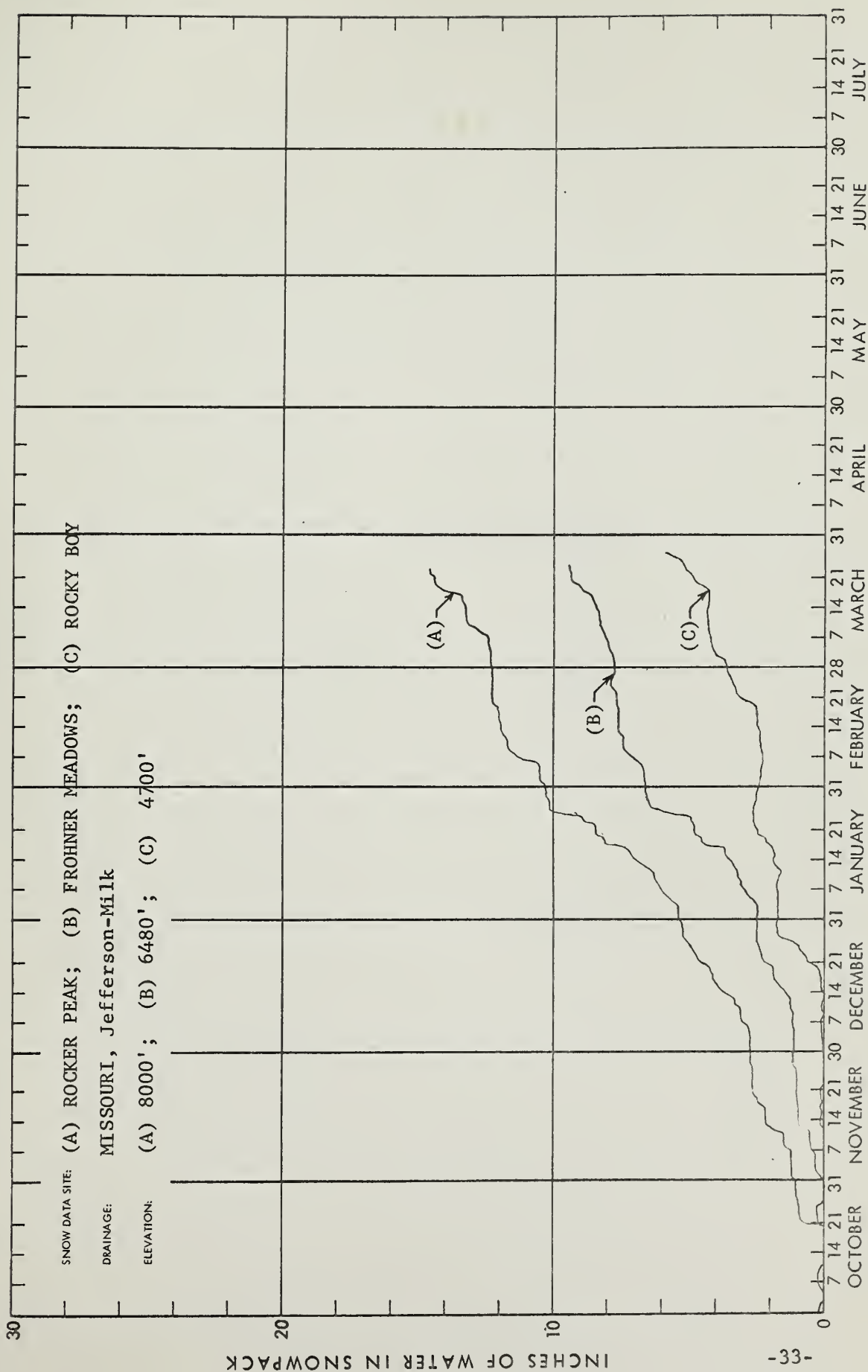
DRAINAGE: MISSOURI, Judith

ELEVATION: (A) 8000'; (B) 6450'

INCHES OF WATER IN SNOWPACK

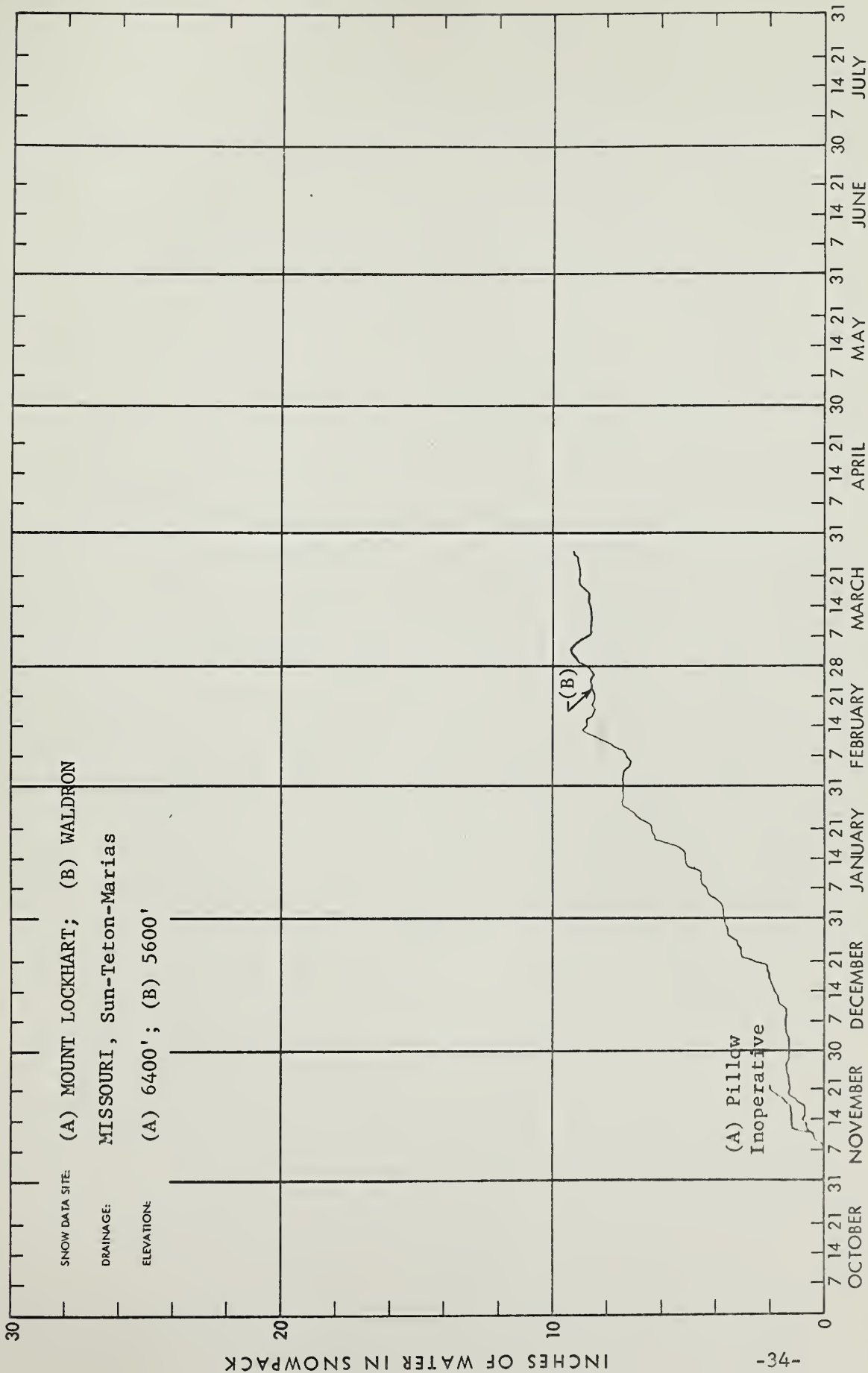
-32-



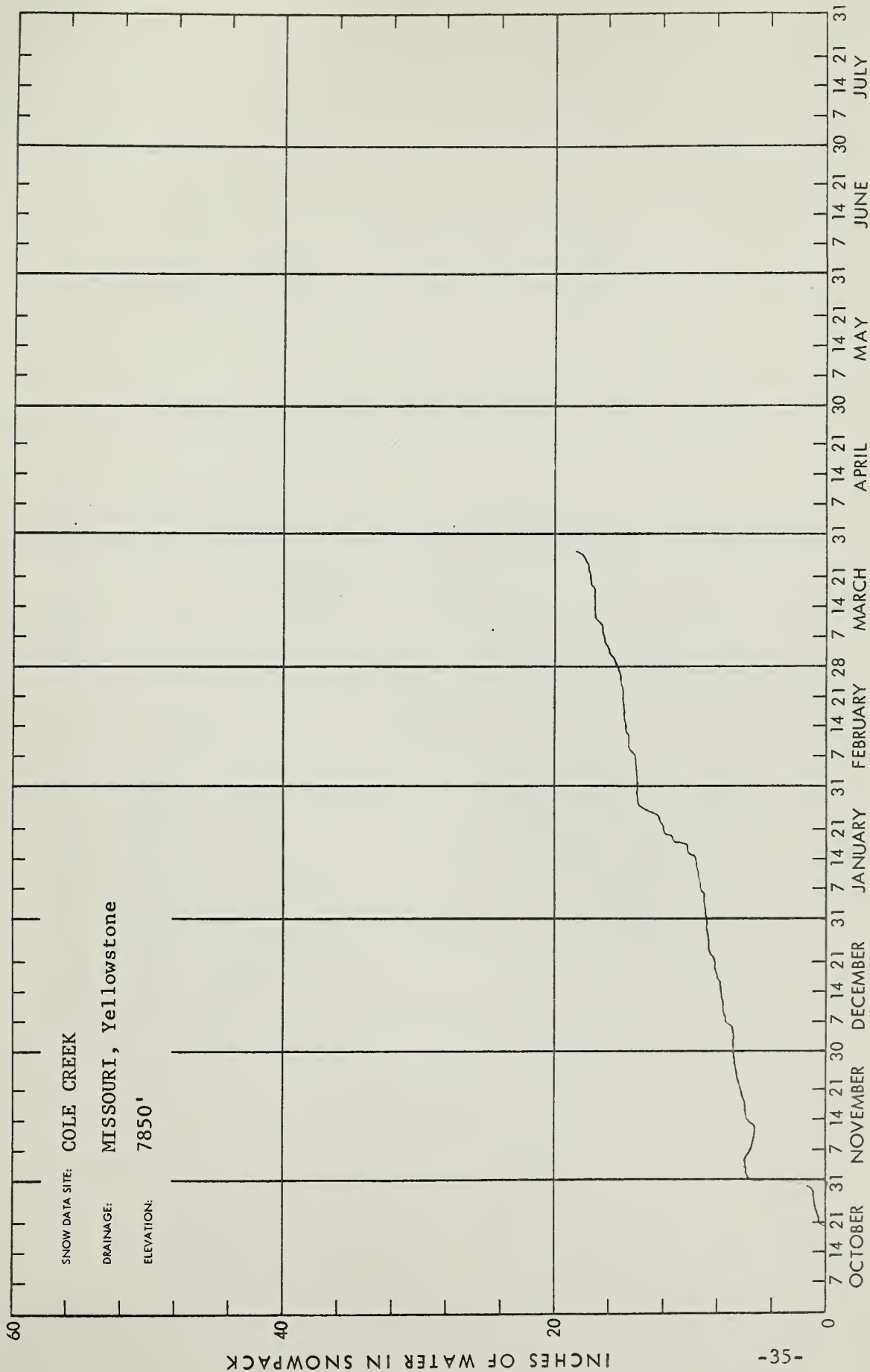






















# INDEX to MONTANA SNOW COURSES and DATA SITES

Drainage Basin to Snow Course	Number	Elev.	Sec.	Top.	Range	Sensors in Addition to Snow Course	Measurements by Date	Notes
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
Bloody Creek	13010	7600	12	85	16W		3,4,5	1
Carter Creek	12004	7400	22	95	7W	P,ASC	3,4,5	1
Red Creek	13022	8400	24	125	13W		3,4,5	1
Elk River Springs	13015	7800	21	45	12W		3,4,5	1
Lakeview Canyon	11004	6900	26	165	2W	H,ASC	3,4,5	1
Lehigh Ridge	13023	8100	4	105	13W	P	3,4,5	1
White Pine Ridge	12001	8800	18	145	9W		3,4,5	1
BIG HORN RIVER								
Abundance Lake	13020	8600	7	35	11W		3,4,5	1
Bull Mountain	12008	7500	3	11N	10W		3,4,5	1
Deer Lake	13019	8600	4	65	16W	P	3,4,5	1
Fletcher Ridge	12007	6600	18	2N	9W		3,4,5	1
Hold Lake	13025	8200	24	2N	13W		3,4,5	1
Shing-Ni-Lake	13024	8700	27	35	17W		3,4,5	1
JEFFERSON RIVER								
Berry Meadow	12007	7000	8	3N	5W		3,4,5	1
Copper Mountain	12009	7700	13	3N	7W		3,4,5	1
Her Perce Creek	12010	8100	16	4N	6W		3,4,5	1
Pocket Peak	12011	7200	10	1N	7W		3,4,5	1
Rocky Peak	12012	8000	17	7N	5W	S,P	3,4,5	1
MADISON RIVER								
Black Bear	11017	7900	27	15S	3E	S,P	3,4,5	1
Four Mile	11012	6900	5	45	2W	P	3,4,5	1
Hedgehog	11005	6500	22	11S	3E		3,4,5	1
Lakeview	11021	7100	27	11S	1E		3,4,5	1
Lower Main	11011	7000	32	45	3W		3,4,5	1
North Fork	11003	7500	24	35	3W		3,4,5	1
Pennington Park	11021	7100	33	10S	3E		3,4,5	1
Sentinel Creek	11022	8000	15	12S	1W	S	3,4,5	1
West Yellowstone	11027	6700	34	13S	5E	S,P	3,4,5	1
Whiskey Creek	11030	6800	19	14S	5E	S,P	3,4,5	1
GALLATIN RIVER								
Acorn Falls	11016	7300	3	5S	6E		3,4,5	1
Big Sky	11017	7700	30	6S	3E	P	3,4,5	1
Carter Creek	11029	9000	18	10S	4E		3,4,5	1
Collier Site	11002	4800	18	2S	5E	H,ASC	3,4,5	1
Lower Main	11003	6600	22	45	6E		3,4,5	1
Little Park	11010	6400	10	4S	6E	S,P	3,4,5	1
Shower Falls	11016	6700	34	3S	6E	S,P	3,4,5	1
Twenty-One Mile	11016	6700	34	3S	6E	S,P	3,4,5	1
MISSOURI RIVER MAIN STEM								
Chadman Reservoir	12005	6200	2	8N	3W		3,4,5	1
Chadman Creek	12006	6500	10	1N	3W		3,4,5	1
Chadman Lake	12007	6800	13	8N	3W		3,4,5	1
Chadman Meadow	12008	6400	23	8N	3W		3,4,5	1
Chadman Ridge	12009	6500	19	18N	9W		3,4,5	1
Chadman Station	12010	6600	20	20N	9W	P	3,4,5	1
Chadman Trail	12011	6700	21	21N	9W		3,4,5	1
Chadman Valley	12012	6800	22	22N	9W		3,4,5	1
Chadman West	12013	6900	23	23N	9W		3,4,5	1
Chadman North	12014	7000	24	24N	9W		3,4,5	1
Chadman South	12015	7100	25	25N	9W		3,4,5	1
HUDSON BAY BASIN								
Chadman East	12016	7200	26	26N	9W		3,4,5	1
Chadman West	12017	7300	27	27N	9W		3,4,5	1
Chadman North	12018	7400	28	28N	9W		3,4,5	1
Chadman South	12019	7500	29	29N	9W		3,4,5	1
Chadman East	12020	7600	30	30N	9W		3,4,5	1
Chadman West	12021	7700	31	31N	9W		3,4,5	1
Chadman North	12022	7800	32	32N	9W		3,4,5	1
Chadman South	12023	7900	33	33N	9W		3,4,5	1
Chadman East	12024	8000	34	34N	9W		3,4,5	1
Chadman West	12025	8100	35	35N	9W		3,4,5	1
Chadman North	12026	8200	36	36N	9W		3,4,5	1
Chadman South	12027	8300	37	37N	9W		3,4,5	1
Chadman East	12028	8400	38	38N	9W		3,4,5	1
Chadman West	12029	8500	39	39N	9W		3,4,5	1
Chadman North	12030	8600	40	40N	9W		3,4,5	1
Chadman South	12031	8700	41	41N	9W		3,4,5	1
Chadman East	12032	8800	42	42N	9W		3,4,5	1
Chadman West	12033	8900	43	43N	9W		3,4,5	1
Chadman North	12034	9000	44	44N	9W		3,4,5	1
Chadman South	12035	9100	45	45N	9W		3,4,5	1
Chadman East	12036	9200	46	46N	9W		3,4,5	1
Chadman West	12037	9300	47	47N	9W		3,4,5	1
Chadman North	12038	9400	48	48N	9W		3,4,5	1
Chadman South	12039	9500	49	49N	9W		3,4,5	1
Chadman East	12040	9600	50	50N	9W		3,4,5	1
Chadman West	12041	9700	51	51N	9W		3,4,5	1
Chadman North	12042	9800	52	52N	9W		3,4,5	1
Chadman South	12043	9900	53	53N	9W		3,4,5	1
Chadman East	12044	10000	54	54N	9W		3,4,5	1
Chadman West	12045	10100	55	55N	9W		3,4,5	1
Chadman North	12046	10200	56	56N	9W		3,4,5	1
Chadman South	12047	10300	57	57N	9W		3,4,5	1
Chadman East	12048	10400	58	58N	9W		3,4,5	1
Chadman West	12049	10500	59	59N	9W		3,4,5	1
Chadman North	12050	10600	60	60N	9W		3,4,5	1
Chadman South	12051	10700	61	61N	9W		3,4,5	1
Chadman East	12052	10800	62	62N	9W		3,4,5	1
Chadman West	12053	10900	63	63N	9W		3,4,5	1
Chadman North	12054	11000	64	64N	9W		3,4,5	1
Chadman South	12055	11100	65	65N	9W		3,4,5	1
Chadman East	12056	11200	66	66N	9W		3,4,5	1
Chadman West	12057	11300	67	67N	9W		3,4,5	1
Chadman North	12058	11400	68	68N	9W		3,4,5	1
Chadman South	12059	11500	69	69N	9W		3,4,5	1
Chadman East	12060	11600	70	70N	9W		3,4,5	1
Chadman West	12061	11700	71	71N	9W		3,4,5	1
Chadman North	12062	11800	72	72N	9W		3,4,5	1
Chadman South	12063	11900	73	73N	9W		3,4,5	1
Chadman East	12064	12000	74	74N	9W		3,4,5	1
Chadman West	12065	12100	75	75N	9W		3,4,5	1
Chadman North	12066	12200	76	76N	9W		3,4,5	1
Chadman South	12067	12300	77	77N	9W		3,4,5	1
Chadman East	12068	12400	78	78N	9W		3,4,5	1
Chadman West	12069	12500	79	79N	9W		3,4,5	1
Chadman North	12070	12600	80	80N	9W		3,4,5	1
Chadman South	12071	12700	81	81N	9W		3,4,5	1
Chadman East	12072	12800	82	82N	9W		3,4,5	1
Chadman West	12073	12900	83	83N	9W		3,4,5	1
Chadman North	12074	13000	84	84N	9W		3,4,5	1
Chadman South	12075	13100	85	85N	9W		3,4,5	1
Chadman East	12076	13200	86	86N	9W		3,4,5	1
Chadman West	12077	13300	87	87N	9W		3,4,5	1
Chadman North	12078	13400	88	88N	9W		3,4,5	1
Chadman South	12079	13500	89	89N	9W		3,4,5	1
Chadman East	12080	13600	90	90N	9W		3,4,5	1
Chadman West	12081	13700	91	91N	9W		3,4,5	1
Chadman North	12082	13800	92	92N	9W		3,4,5	1
Chadman South	12083	13900	93	93N	9W		3,4,5	1
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Chadman North	12086	14200	96	96N	9W		3,4,5	1
Chadman South	12087	14300	97	97N	9W		3,4,5	1
Chadman East	12088	14400	98	98N	9W		3,4,5	1
Chadman West	12089	14500	99	99N	9W		3,4,5	1
Chadman North	12090	14600	100	100N	9W		3,4,5	1
Chadman South	12091	14700	101	101N	9W		3,4,5	1
Chadman East	12092	14800	102	102N	9W		3,4,5	1
Chadman West	12093	14900	103	103N	9W		3,4,5	1
Chadman North	12094	15000	104	104N	9W		3,4,5	1
Chadman South	12095	15100	105	105N	9W		3,4,5	1
Chadman East	12096	15200	106	106N	9W		3,4,5	1
Chadman West	12097	15300	107	107N	9W		3,4,5	1
Chadman North	12098	15400	108	108N	9W		3,4,5	1
Chadman South	12099	15500	109	109N	9W		3,4,5	1
Chadman East	12100	15600	110	110N	9W		3,4,5	1
Chadman West	12101	15700	111	111N	9W		3,4,5	1
Chadman North	12102	15800	112	112N	9W		3,	

# Agencies and Organizations Cooperating in Montana Snow Surveys

## GOVERNMENT AGENCIES

### Canada:

Water Survey of Canada, Calgary, Department of the  
Environment  
Water Resources Service, Department of Lands, Forests  
and Water Resources, British Columbia

### Federal:

Department of the Army  
Corps of Engineers  
U.S. Department of Agriculture  
Forest Service  
Soil Conservation Service  
U.S. Department of Commerce  
NOAA, National Weather Service  
U.S. Department of the Interior  
Bonneville Power Administration  
Bureau of Indian Affairs  
Bureau of Reclamation  
Fish and Wildlife Service  
Geological Survey  
National Park Service

## STATE

Montana Association of Conservation Districts  
Montana Department of Fish and Game  
Montana Department of Natural Resources and  
Conservation  
Montana State University - Agricultural Experiment  
Station  
North Montana Branch Station - Agricultural Exper-  
iment Station  
University of Montana - School of Forestry

## PRIVATE

Montana Power Company

Other organizations and individuals furnish valuable  
information for snow survey reports. Their cooperation  
is gratefully acknowledged.



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